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Development and Validation of the

Cognitive Vulnerability Schemas Questionnaire for Anxious Youth

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Development and Validation of the Cognitive Vulnerability Schemas Questionnaire for Anxious Youth

by

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Dissertation

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According to cognitive theories of anxiety, anxiogenic schemata are a set of beliefs, rules, and assumptions that influence how those with anxiety make inferences and interpret threat. It is hypothesized that each anxiety disorder has a unique anxiogenic schema. This report describes the development of the Cognitive Vulnerability Schemas Questionnaire for Anxious Youth, an instrument used to measure anxiogenic schemata in youth aged 7-17 years old. Factor analyses of the scale demonstrated two empirically distinct and relatively stable dimensions of anxiogenic schema. The two identified factors of anxiogenic schema were: (1) Generalized Anxiety and Social Phobia Schema, and (2) Separation Anxiety Schema. The measure demonstrated good psychometric properties on a range of indices of reliability and validity.

Results indicated that scores on the questionnaire subscales predicted anxiety symptomology. Regression analyses showed that both factors were predictors of anxiety

symptomology, however did not predict anxiety diagnosis. Significant differences in the Cognitive Vulnerability Schemas Questionnaire for Anxious Youth subscales were demonstrated between patients with clinically significant Generalized Anxiety Symptoms, Social Phobia Symptoms, and Separation Anxiety Symptoms. The implications of these findings for theories of cognitive vulnerability and schema development in youth are discussed.

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Chapter 1: Introduction

Anxiety disorders are the most prevalent form of psychological disorders (Kessler, Chiu, Demler, &Walters, 2005), with lifetime prevalence rates between 25-30% in adult populations (Kessler et al., 1994), and six-month prevalence rates of 6-17% in children and adolescents (Breton et al., 1999; Romano, Tremblay, Vitaro, Zuccolillo, & Pagani, 2001). They are also the most financially costly group of mental disorders with annual direct and indirect costs coming in at 43.2 billion dollars (Dupont et al., 1996; Greenburg et. al, 1999). Additionally, the majority of anxiety disorders develop in childhood and adolescence (Newman et al., 1996), increasing the need for early interventions to not only reduce financial costs but to explore how anxiety disorders develop and perpetuate through the years. These statistics reveal a large need for continued research to aid in the development of appropriate treatments to assist anxious individuals, particularly youth, so both financial and emotional costs are curbed as early as possible.

Multiple theories have been proposed to understand and address the treatment of anxiety disorders. Past research on the biological, behavioral, and cognitive models has examined the multifaceted layers of anxiety disorders. Biological models have investigated the psychophysiological reactions associated with anxiety including persistent elevated autonomic arousal such as elevated heart rate. Additionally researchers have concluded that those with anxiety tend to have an elevated basal level, even in the absence of a feared or anxiety provoking situation (Barlow, 2002). Genetic factors have been shown to be a major contributing factor to anxiety with estimates of heritability ranging from 30-40% across all anxiety disorders (Barlow, 2002). Barlow's

(2002) meta-analysis of family and twin studies supported the concept that there is an overarching genetic vulnerability for anxiety, rather than a defined genetic predisposition for specific type of anxiety disorder. Barlow, Allen, and Choate (2004) labeled this vulnerability a "negative affect syndrome", yet, as others have pointed out, cognitive factors may also interact with this genetic predisposition. It is this interaction that allows for the expression of specific anxiety disorders.

A number of theoretical models have been utilized in anxiety research to help explain how symptoms develop and persist. Behavioral models, including classical conditioning, and later, the two factor theory of conditioning, evaluated how fear was an acquired response which persisted due to the reinforcement of avoidance. However these models did not account for why some individuals acquired a phobia and why some didn't when presented with a similarly traumatic experience or stimuli (Rachman, 1977). Eventually, behavioral researchers concluded that there must be some underlying cognitive constructs that help better explain the development and maintenance of anxiety (Brewin, 1988; Davey, 1977).

For the last 40 years the tripartite model of anxiety, which is composed of (1) physiological responses, (2) subjective responses (also known as the cognitive dimension), and (3) behavioral responses, has been the dominant model for the conceptualization of anxiety disorders in children, adolescents, and adults (Lang, 1968). The subjective response allows us to understand why anxiety may persist, even in the absence of danger or threat (Clark & Beck, 2010). In 1985, Beck developed a cognitive model for anxiety that further examined how cognitions play a major role in the presentation and maintenance of anxiety disorders. The concept of heightened cognitive

vulnerability is a core component in the cognitive model of anxiety (Beck et al., 1985, 2005). Cognitive vulnerability is "conceptualized as a predisposition to misinterpret potentially threatening or novel situations as dangerous and devoid of safety, leaving the individual in a state of perceived helplessness (Clark & Beck, 2010, p.111)." This cognitive vulnerability model describes a process of cognitive evaluation in terms of a two-step process. First the primary appraisal of threat, then, a secondary elaborative reappraisal occurs. These two steps serve to explain how anxious individuals hold a preconscious attentional bias that supports their automatic tendency to evaluate stimuli as threatening. The cognitive vulnerability model describes through evaluation of the primary appraisal of threat that those with anxiety tend to perceive the severity of harm in a much more unrealistic and overestimated fashion. This maladaptive cognitive evaluation eventually leads to avoidance of the stimuli (Rachman, 2004), which reinforces the anxious cognitive schema by reducing the anxiety through avoidance. Additionally, those with high vulnerability for anxiety tend to underestimate their overall ability to cope with the perceived or realistic threat (Beck et al., 1985, 2005). Therefore, when they enter into the second phase, the elaborative reappraisal, they immediately amplify the perception of threat resulting in a heightened state of anxiety as they are unable to cope with the distress of the stimuli. As a result, those individuals with thoughts of high threat probability and low coping tend to have higher anxiety compared to those who have thoughts of low threat probability with high coping (Clark & Beck, 2010). This increased susceptibility, or vulnerability, to anxiety reinforces their cognitions or core beliefs (schemata) that one is personally vulnerable or helpless, and

also, that they are ill-equipped with suitable coping strategies to adequately deal with a threat.

In Beck's cognitive model of anxiety, schemata "represent beliefs, rules, and assumptions that are relevant to making inferences and interpretations of threat (Clark & Beck, 2010; Clark & Beck, 2010, p.45)." These schemata are activated automatically once a threat is detected and as a result they tend to be rigid, inflexible, and dominant, making it nearly impossible for an anxious individual to process anything but threat. As a result of this heightened threat mode, people with anxiety tend to have heightened autonomic arousal, such as increased heart rate, that is proportional to their perceived estimate of danger (Beck et al., 1985, 2005). They also tend to have defensive inhibitory responses that include avoidance, escaping, freezing, or fainting. Additionally they tend to make more cognitive processing errors such as minimization (underestimation of positive personal resources), selective abstraction (focusing on their weaknesses), magnification (views flaws as disproportional weaknesses), or catastrophizing (assuming that threats have terrible consequences). As a result, once these threat schemata are activated, it would be extremely difficult for an individual with anxiety to process threat-related information in any other way (Clark & Beck, 2010). Bogles and Zigterman (1999) examined anxious cognitive schemata in 9-18-year-olds by eliciting free and closed responses to ambiguous stories detailing a social, separation, or generalized scenario. As predicted, and in line with Beck's cognitive vulnerability model, anxious children judged the ambiguous story situations as more dangerous on closed responses compared to the control groups. Additionally, anxious children estimated their influence and coping competency to be lower than controls in both the open and closed responses

(Bogles & Zigterman, 1999). This study supports Beck's (adult) cognitive vulnerability model of anxiety in the development of anxiety disorders in children and adolescents. Specifically, it supports the theory that children and adolescents also have anxious cognitive schemata that, in turn, may lead to increased vulnerability.

The evaluation of one's own coping resources is the foundation of the secondary reappraisal within the cognitive vulnerability model of anxiety (Beck, 1985, 2002). Within this reappraisal, those with anxiety not only evaluate their coping resources as insufficient by evaluating them in terms of their weaknesses, they also view themselves as incapable of utilizing established coping skills. As a result of their self-doubt and hesitation their cognitive set of vulnerability, or anxious schemata, is reinforced, causing them to retreat and avoid the fearful stimuli. For over 30 years, researchers have included some form of coping strategies in the treatment of anxiety disorders in children and adolescents, as well as adults (Kane & Kendall, 1989; Lazarus & Folkman, 1984). However, research investigating cognitive vulnerability to anxiety has not specifically included coping cognitions as a part of the anxiogenic schema.

Schema research varies between social, cognitive, and clinical psychology (Ingram, 1986). Cognitive researchers have historically examined schemata in terms of their cognitive structure, or nonconscious schemata (ie; depressogenic schemata) (Beck, 1967, 1976; Ingram 1984), whereas social and clinical psychology have tended to examine them in terms of cognitive content (e.g., "what were you thinking about when you became scared), or those thoughts and images that are readily accessible and experienced by an individual (Ingram & Kendall, 1987). Within this area of research "cognitive structure represents the manner in which information is organized and, along

with content, constitutes the structural notion of the schema" (Kendall & Hollon, 1989, p. 82). It is this 'structural notion of the schema', or those that are nonconscious, that have been shown to contribute to increased vulnerability in disorders such as depression. Although structural research examining depressogenic schemata has supported Beck's cognitive model of depression, similar research in the area of anxiety is lacking. As a result, the investigation of anxiogenic schemata has become even more critical in when examining Beck's cognitive model of vulnerability in anxiety (Beck, 1976; Beck & Emery, 1985). However, due to the lack of anxiogenic schema research, additional information must be gleaned from bridging cognitive vulnerability with broader schema theories.

Cognitive vulnerability and depressogenic schemata have been evaluated over the past 15 years; however, as noted previously, similar research exploring the cognitive vulnerability model and anxiogenic schemata in youth is extremely limited. Part of this lack of research may be due to an insufficient number of appropriate measures that investigate cognitive vulnerability in youth, and therefore the development of a measure for anxiogenic schemata should be informed by additional schema measures. As it stands today, there are no specific measures evaluating anxiogenic cognitive schemata that increase cognitive vulnerability in youth. However, there are a few within depressogenic schemata research including the Automatic Thoughts Questionnaire (ATQ; Hollon & Kendall, 1980), Dysfunctional Attitude Scale (DAS; Weissman, 1979), as well as laboratory tasks such as the Emotional Stroop Task, and the Scrambled Sentences Test (SST; Wenzlaff, 1988; 1993). Research on a specific schema measure is limited, and general, including the Schema Questionnaire (SQ; Schmidt, Joiner, Young, & Telch,

1995) and the Young Schema Questionnaire (YSQ-SF; Young & Brown, 2003), both of which identify maladaptive cognitive schemas. They, however, do not identify specific factors that load onto specific common childhood anxiety disorders such as Generalized Anxiety Disorder, Social Phobia, and Separation Anxiety Disorder. Additionally, these broad schema measures do not utilize cognitive vulnerability theory and are most often normed on adult populations. Therefore a youth measure aimed at identifying cognitive schemata that increase vulnerability in anxious youth is needed to establish support for Beck's cognitive vulnerability model of anxiety in youth as well as to inform and assist in the development of more effective treatments for youth with anxiety disorders.

The purpose of this study is to develop and evaluate the validity of a measure that examines anxious cognitive schemata in youth. The instrument items will be derived from the limited research on anxiogenic schemata as well as Beck's model of cognitive vulnerability (1985, 2002). Participants will be drawn from a large treatment study evaluating the efficacy of a combined CBT and parent training intervention with anxious youth aged 7-17 years old, an outpatient psychology/psychiatry clinic, as well as the local community. Participants include clinically anxious youth, non-anxious youth, as well as youth with other primary disorders including, but not limited to, Attention Deficit Hyperactivity Disorder, Oppositional Defiant Disorder, Conduct Disorder and ADHD, ODD, CD, Bipolar Disorder, and Major Depressive Disorder.

Measures utilized in this study include the Cognitive Vulnerability Schema Questionnaire for Anxious Youth (CVSQ-AY; Winton, Stark, under development), which will be developed through a series of writing sessions, clinician questionnaires, focus groups, and factor analyses to evaluate validity and reliability. The Screen for

Child Anxiety related Emotional Disorders (SCARED-child version; Birmaher, Khetarpal, Cully, Brent & McKenzie, 1997) is a standard measure that will be utilized to determine youth anxiety status and symptomology. The final measure will consist of select questions from the Youth Schema Questionnaire (YSQ-S2; Young, 2003). The select schema questions have been established to predict the presence of an anxiety disorders and will be used to establish concurrent validity.

More broadly, this study will examine clinically-anxious, clinical control, and non-clinical control youth on schemata that may support, or increase vulnerability for, a diagnosis of anxiety. Once data has been collected, exploratory factor analyses and correlations will be utilized to determine validity, item discrimination, factor loadings, as well as correlation coefficients for the evaluation of research questions. Additional research questions will evaluate the schematic predictability of the questionnaire to identify an anxiety disorder in youth. Subsequent analyses will seek to determine if the CVSQ-AY differentiates those with Generalized Anxiety Disorder, Social Phobia, and Separation Anxiety Disorder.

Previous research in the cognitive schemata of anxiety in both adults and children has lagged behind cognitive schemata and vulnerability research with depression. It is important that a measure for anxious schemata in youth is developed and validated to help support and guide research with children and adolescents with anxiety disorders. The development of a measure for youth is especially important as the majority of anxiety disorders develop during childhood or adolescence. Furthermore, although Beck's cognitive model of anxiety has been supported in adult research, the examination of anxiogenic schemata in youth has yet to be evaluated.

Chapter 2: Literature Review

OVERVIEW OF ANXIETY DISORDERS

Anxiety disorders have been conceptualized as a culmination of cognitive, affective, physiological and behavioral responses to a perceived or anticipated threat. These reactions are often perceived to be uncontrollable and unpredictable and are often quite difficult to cope with for anxious persons (Clark & Beck, 2010). However, understanding the difference between normal amounts of anxiety and an anxiety disorder is important for diagnosis, identifying those in need of treatment, and for furthering research. Those with clinically significant levels of anxiety tend to have dysfunctional cognitions, impaired functioning, persistence, false alarms, and stimulus hypersensitivity (Clark & Beck, 2010). DSM-IV-TR anxiety disorders are listed below in Table 1 with abbreviated descriptions. Each of these disorders must include those five criteria to be considered for a clinical diagnosis.

Table 1: DSM-IV-TR Anxiety Disorders

Panic Attack	Intense feelings of fear that strike suddenly and repeatedly with no warning, often accompanied by somatic symptoms including sweating, chest pain, heart palpitations, etc
Agoraphobia	Anxiety related to avoidance of, places or situations from which escape may be difficult
Panic Disorder Without Agoraphobia	Recurrent unexpected Panic Attacks about which there is persistent concern
Agoraphobia Without History of Agoraphobia	Presence of Agoraphobia and panic-like systems without a history of Panic Attacks
Specific Phobia	Intense fear of a specific situation or object
Social Phobia	Worry and self-conscious fear about social situations and negative evaluation by others
Obsessive-Compulsive Disorder	Constant thoughts (obsessions) or fears that cause them to perform certain rituals or routines (compulsions).
Posttraumatic Stress Disorder	Long-term lasting and frightening thoughts and memories of the a traumatic event such as a war experience, car accident, or sexual/physical assault often accompanied by vivid dreams and a heightened sense of their surroundings (hypervigilance)
Acute Stress Disorder	Increased anxiety and arousal due to a traumatic event
Generalized Anxiety Disorder	Excessive worry evidenced for at least six months
Anxiety Due to General Medical Condition	Anxiety symptoms due to a medical condition
Substance-Induced Anxiety Disorder	Anxiety symptoms that are determined to be a direct physiological consequence of a drug of abuse, a medication, or toxin exposure
Anxiety Disorder Not-Otherwise Specified	Symptoms of anxiety or phobic avoidance that do not meet diagnostic criteria for any specific Anxiety Disorder
Separation Anxiety Disorder*	Intense anxiety due to separation from a parent
Sexual Aversion Disorder	Phobic avoidance that is limited to genital sexual contact with a sexual partner

*May only be diagnosed in children and adolescents

The need for continued research on anxiety disorders becomes greater as prevalence rates and economic costs continue to rise. According to data from the National Cormorbidity Study (NCS) the lifetime prevalence rate for anxiety is 24.9% with an annual prevalence rate of 17.2% (Kessler et al, 1994). Additionally, these rates may not be representative of all anxiety disorders as the NCS did not include data from patients with OCD or PTSD, therefore rates may actually be higher. As a result, anxiety disorders are the most financially costly group of mental disorders with an annual direct and indirect cost of 43.2 billion dollars in 1990 (Dupont et al., 1996; Greenburg et. al, 1999), however this estimate is over 20 years old and was limited to participants aged 15-54 years old. Additionally, the impact and cost of anxiety disorders in adults as well as children is multi-faceted. Individuals suffering with anxiety disorders are more likely to report a reduction in quality of life and social functioning (Sherbourne, Wells, Meredith, Jackson, & Camp, 1996), have school performance difficulties (Essau et al., 2000), and experience social neglect from their peers (Strauss, Lahey, Frick, Frame, & Hynd, 1988).

Prevalence estimates of anxiety disorders vary greatly from disorder to disorder as well as between adults and children. Anxiety rates for children aged 6-12 years old range from 7.1%-28.5% with a mean rate of 12.3%. Specific anxiety disorder rates for children include Generalized Anxiety Disorder 1.7%, Social Phobia 2.2%, and Separation Anxiety Disorder at 3.9%. Children aged 13-18 years old have a slightly lower overall average rate of 11% with specific rates similar to children (Generalized Anxiety Disorder 1.7%) with the exception of Social Phobia (5.0%) which increases in adolescence and separation anxiety disorder (2.3%) which decreases in adolescence. The most common anxiety disorders in children and adolescence are specific phobia, Generalized Anxiety

Disorder, and Separation Anxiety Disorder (Breton et al., 1999; Whitaker et al., 1990). Previous studies have determined the mean age of onset of any anxiety disorder before the age of 21 to be 8 years-old, with approximately 50% of cases ranging from 6-12 years old (Kessler et al., 1994). The exception to this is separation anxiety disorder with a mean age of onset being slightly younger at 6.5 years-old. Overall, anxiety disorders are highly prevalent and vary slightly between specific anxiety diagnosis.

Gender differences are relatively inconsistent with regard to adult and child populations. Some adult studies report that women tend to have significantly higher incidence of most anxiety disorders when compared to men (Craske, 2003). However, OCD appears to be the exception, with similar gender rates in adults (Clark, 2004). In studies of youth, similar findings across gender have been found with elevated rates in girls compared to boys (Lewinsohn, Gotlib, Lewinsohn, Seeley, Allen, 1998; Yonkers & Gurguis, 1995) with some exceptions that will be discussed later.

Overall, comorbidity rates vary between studies; however anxiety disorders are most consistently comorbid with one another. In children, anxiety disorders are often not present in isolation and children commonly meet diagnostic criteria for a second anxiety disorder (Costello & Angold, 1995). Anxiety and depression also tend to have high comorbidity, with ranges varying between 15.9%-61.9% (Brady & Kendall, 1992). Additionally, anxiety is often present prior to the onset of depression (Strauss, Last, Hersen, & Kazdin, 1988), making the case for extended research into anxiety disorders even more critical.

Overall, anxiety disorders are a highly prevalent and extremely costly diagnosis within the United States. Studies have concluded that the majority of anxiety disorders begin in childhood or adolescence with the most common being simple phobias, Generalized Anxiety Disorder, and Separation Anxiety Disorder (Breton et al., 1999; Newman et al., 1996; Whitaker et al., 1990). As a result there appears to be a strong need for early identification and research focused on the treatment of anxiety disorders within this youth population. Additional comorbidity rates with regard to specific anxiety disorders will be discussed in subsequent sections. Within this dissertation, specific attention will be given to Generalized Anxiety Disorder, Social Phobia, and Separation Anxiety Disorder.

Generalized Anxiety Disorder

Generalized anxiety disorder (GAD) has two main identifying features: (1) uncontrollable, unrealistic worry about more than one topic and (2) presents with accompanying physicological symptoms (ie; muscle tension, difficulty sleeping, fatigue, restlessness, irritability, and difficulty concentrating) (Beidel & Turner, 2005). Excessive worry, or apprehensive expectation, is the major cognitive component of GAD. Although worry is normal, it is important to differentiate those with worry from those with GAD. Previous studies have identified those suffering with GAD as identifying their worry as uncontrollable, whereas those without an anxiety disorder did not (Abel & Borkovec, 1995). Table 2 provides the DSM-IV-TR diagnostic criteria for GAD.

Table 2: DSM-IV-TR Diagnostic Criteria for Generalized Anxiety Disorder

A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).
B. The person finds it difficult to control the worry.
C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms present for more days than not for the past 6 months). Note: Only one item is required in children.
(1) restlessness or feeling keyed up or on edge (2) being easily fatigued (3) difficulty concentrating or mind going blank (4) irritability (5) muscle tension (6) sleep disturbance (difficulty falling or staying asleep, or restless unsatisfying sleep)
D. The focus of the anxiety and worry is not confined to features of an Axis I disorder, e.g., the anxiety or worry is not about having a Panic Attack (as in Panic Disorder), being embarrassed in public (as in Social Phobia), being contaminated (as in Obsessive-Compulsive Disorder), being away from home or close relatives (as in Separation Anxiety Disorder), gaining weight (as in Anorexia Nervosa), having multiple physical complaints (as in Somatization Disorder), or having a serious illness (as in Hypochondriasis), and the anxiety and worry do not occur exclusively during Posttraumatic Stress Disorder.
E. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
F. The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hyperthyroidism) and does not occur exclusively during a Mood Disorder, a Psychotic Disorder, or a Pervasive Developmental Disorder.

Generalized Anxiety Disorder is a relatively new diagnosis as of 1994, prior to that, excessive worry was categorized as Overanxious Disorder (OAD) and listed in the "Disorders of Childhood" section of the DSM-III (1980). This diagnosis appeared to be too limiting as it overlapped with too many other childhood disorders. Additionally there was limited reliability and over-diagnosis among clinicians and physicians. Therefore, in

the DSM-IV (1994) changes were made to encompass somatic complaints and difficulty controlling the worry that helped frame the disorder as more of a freestanding anxiety disorder.

Children have a number of cognitive symptoms and somatic complaints that support a diagnosis of GAD. Although studies have concluded that childhood worry is quite common with 69% of youth endorsing the presence of worry, those with GAD tend to report an average of six specific areas of worry, where typical youth only endorsed one. Therefore the breadth of the worry appears to be much higher in those youth with GAD (Muris et al., 1998). Common areas of worry endorsed by youth with GAD include health, school, disasters, personal harm, and future events (Weems, Silverman, & La Greca, 2000). The endorsement of at least one somatic symptom is also necessary for the diagnosis of GAD. Common somatic complaints include restlessness (74%), irritability (68%), concentration difficulties (61%), sleep disturbance (58%), easily fatigued (52%), headaches (36%), muscle tension (29%), and stomachaches (29%) (Tracey et al., 1997). Overall, although worry is common, the endorsement of multiple areas of worry coupled with somatic complaints is most often evident in youth with GAD.

Previous research has produced mixed results with respect to sociodemographic influences on GAD. The mean age of onset appears to consistently be between 10.8-13.4 years old (Last, Strauss, et al., 1987; Last, Hersen et al., 1987), however the complexity and differences in expression between ages is more inconsistent. Several studies reported no differences between age groups of children on the clinical presentation of GAD or OAD (Masi et al., 1999; Strauss, Lease, Last & Francis, 1988). Masi et al. (1999) supported this research, however others (Strauss et al., 1988) reported that older children

tended to have more symptoms than younger children. Research on gender differences in children and adolescents is somewhat lacking, however the few studies that have been conducted report no gender differences in children aged 9-13 (Last et al., 1987). Studies conducted with adolescents have concluded that girls tend to be diagnosed with GAD more, however differences may be due in part to a lower number of boys reporting their worries (Valez, Johnson, & Cohen, 1989).

Comorbidity rates with other anxiety disorders as well as depression are quite high among children and adolescents with GAD. In a study evaluating comorbidity rates among children and adolescents with GAD, researchers concluded that 62% of their sample of GAD had a comorbid depressive disorder (58% of children & 64% of adolescents) (Masi et al., 1999). Additionally 53% of those with GAD had a comorbid anxiety disorder (63% of children & 48% of adolescents); 21% separation anxiety disorder, 29% specific phobia, and 10% OCD (Masi et al., 1999). Comorbidity rates of GAD and externalizing disorders (ODD, CD, ADHD) were relatively rare (9%). Rates of those with comorbid separation anxiety disorder tended to be higher in children compared to adolescents, however no gender differences were found (Masi et al., 1999). Additional comorbidity research has concluded that children and adolescents with comorbid GAD and dysthymia tended to present with symptoms of GAD preceding dysthymia (Strauss, Last, Hersen, & Kazdin, 1988), which is consistent with anxiety disorders overall.

Social Phobia

Social phobia (SOP), also known as social anxiety disorder, was first presented in the DSM-III (APA, 1980), however this original definition focused mostly on

performance-related anxiety. Additions to the symptoms were available in 1987 with the publication of the DSM-III-R that included fears, which extended into most social situations. Currently, the DSM-IV-TR (APA, 2000) defines SOP as "A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others." Additional diagnostic criteria include the fear that the person will act in a way that is humiliating or that they may somehow embarrass themselves. Somatic and physical features such as increased heartbeat, sweating, and dizziness may manifest, as well as a situationally predisposed panic attack. In children these features may manifest in crying, tantrums, or freezing when presented with anxiety provoking social situations. Additional diagnostic criteria are listed in Table 3 below.

Table 3: DSM-IV-TR Diagnostic Criteria for Social Phobia

A. A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. The individual fears that he or she will act in a way (or show anxiety symptoms) that will be humiliating or embarrassing. Note: In children, there must be evidence of the capacity for age-appropriate social relationships with familiar people and the anxiety must occur in peer settings, not just in interactions with adults.
B. Exposure to the feared social situation almost invariably provokes anxiety, which may take the form of a situationally bound or situationally predisposed Panic. Note: In children, the anxiety may be expressed by crying, tantrums, freezing, or shrinking from social situations with unfamiliar people.
C. The person recognizes that the fear is excessive or unreasonable. Note: In children, this feature may be absent.
D. The feared social or performance situations are avoided or else are endured with intense anxiety or distress
E. The avoidance, anxious anticipation, or distress in the feared social or performance situation(s) interferes significantly with the person's normal routine, occupational (academic) functioning, or social activities or relationships, or there is marked distress about having the phobia.
F. In individuals under age 18 years, the duration is at least 6 months.
G. The fear or avoidance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition and is not better accounted for by another mental disorder (e.g., Panic Disorder With or Without Agoraphobia, Separation Anxiety Disorder, Body Dysmorphic Disorder, a Pervasive Developmental Disorder, or Schizoid Personality Disorder).
H. If a general medical condition or another mental disorder is present, the fear in Criterion A is unrelated to it, e.g., the fear is not of Stuttering, trembling in Parkinson's disease, or exhibiting abnormal eating behavior in Anorexia Nervosa or Bulimia Nervosa.
Specify if: Generalized: if the fears include most social situations (also consider the additional diagnosis of Avoidant Personality Disorder)

Social Phobia is one of the most commonly diagnosed anxiety disorders as well as emotional disorders in general (Kessler, 2003). The lifetime prevalence rates of SOP

range between 2.4% and 13.3% (Kessler et al. 1994; Schneier et al. 1992) with rates being higher among clinical patients. Social Phobia frequency rates tend to increase with age with a mean age of onset in clinical samples ranging from 11.3 to 12.3 years (Last, Perrin, Hersen, Kazdin, 1992; Strauss & Last 1993) and the majority of cases occurring before the age of 20 (Ost, 1987). In community samples females tend to receive more diagnoses than males, although gender differences are not as pronounced in clinical samples (Beidel & Morris, 1995; Essau, Conradt, & Petermann, 1999; Last et al., 1992; Schneier et al., 1992). The initial presentation of SOP symptoms vary, but most people report an onset with feelings of humiliation or embarrassment around friends in elementary school (Stein, 2004).

Those with SOP tend to endorse two main types of fears: interpersonal interactions, such as initiating or maintaining conversations with others, and fears of embarrassment or humiliation associated with being negatively evaluated or scrutinized, such as public speaking, eating or drinking in front of others, or taking an exam (Stein, 2004). In most instances, those suffering from SOP attempt to avoid the feared situation. If avoidance is not possible, anxious anticipation or distress may occur, which can significantly interfere with a person's daily functioning in friendships, social situations, school, or general activities. As levels of fear and anxiety increase, the likelihood of a panic attack also increases. Symptoms may include sweating, trembling or shaking, nausea, muscle tension, or a blank mind. It is important to differentiate between SOP and panic disorder. Those suffering from SOP are most often concerned about humiliation or embarrassment (e.g., getting the wrong answer when called on, saying the wrong thing in casual conversations); those suffering from panic disorder are most often concerned

about the physical and mortal consequences of an impending panic attack (e.g., "Do people notice I'm shaking? My heart is going to beat out of my chest"), with the humiliation or embarrassment being secondary (Stein, 2004).

In later adolescence the effects of SOP are more easily quantified in poor school performance and higher rates of school drop-out. Studies of adults with SOP report symptoms to be more chronic (Schneier, Johnson, Hornig, & Liebowitz, 1992; Wittchen, Essau, von Zerssen, Krieg & Zaudig, 1992), in addition to increased rates of comorbid disorders including alcohol abuse, major depression, GAD, as well as impairment at work and within their social lives (Turner, Beidel & Epstein, 1991; Schneier et al., 1992). Schneier and colleagues (1992) also report that people suffering from SOP are more likely to earn less income, be single, and be less educated than peers not suffering from SOP.

Although there are an increasing number of studies on SOP in adults, researchers have been slow to examine SOP in children and adolescents. Within the child and adolescent research, the majority have been limited to clinical samples (Beidel, Turner, & Morris, 1999, 2000; Ferrell et al., 2004; Francis et al., 1992, Spence, Donovan, & Brechman-Toussaint, 1999; Strauss and Last, 1993), with only a few studies conducted on community samples (Bernstein & Zvolensky, 2007; Gren-Landell et al., 2009). The prevalence rates among children are reported to be around 1.4% (Anderson, Williams, McGee & Silva, 1987; Costello & Benjamin, 1989; Benjamin, Costello & Warren, 1990), increasing to 3.7% once a child reaches adolescence (Verhulst et al.,1997) and again with the clinical sample of adolescence being much higher at 14.9% (Last, Perrin, Hersen & Kazdin, 1992).

The effects of having SOP in school prove to decrease more than just academic standing. Children and adolescents affected by SOP are more likely to have trouble making friends, have poorer leadership skills, be less liked by their peers, have greater attentional difficulties, have lower self-esteem, have greater learning problems, and report less quality in their friendships (Bernstein et al., 2008; Muris & Meesters, 2002, Rodebaugh, 2009). Beidel (1999) has conducted the most thorough evaluation of children and adolescents with SOP to date. Her clinical sample consisted of 50 participants, aged 7-13 years old. Results indicate that children and adolescents with SOP possess poorer social skills, exhibit more avoidant behaviors in social situations, were less likely to engage in extracurricular activities, and had substantial difficulty with interpersonal relationships, with 75% of her sample reporting few or no friends. In a separate study that matched children with SOP to children without SOP, researchers found children affected with SOP viewed themselves as less socially competent, and less likely to experience positive outcomes in peer interactions when compared to their matched classmate (Spence et al., 1999).

Overall, SOP appears to be a pervasive disorder that affects not only school performance and social ability, but also self-esteem, friendship quality, and interpersonal relationships. The prominent features of SOP include a marked and persistent fear of social situations in which the individual anticipates or is exposed to possible scrutiny by others. As with other anxiety disorders there do not appear to be gender, ethnicity, and age differences. Additionally, because the majority of cases of SOP have been shown to be diagnosed prior to 20 years old, expanded research into factors that increase likelihood

or support factors that influence the development of SOP in children and adolescents should be examined.

Separation Anxiety Disorder

Separation Anxiety Disorder (SAD) is defined as a persistent and excessive developmentally inappropriate stress when separated from a parent or significant other. According to the DSM-IV-TR, symptoms of separation anxiety include behavioral avoidance, fearful cognitions, and physiological or somatic complaints or symptoms (APA, 2000.) Additionally, children must exhibit three symptoms for at least four weeks to be considered for the diagnosis. See Table 4 below for additional information regarding DSM-IV-TR criteria.

Table 4: DSM-IV-TR Criteria for Separation Anxiety Disorder

A. Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached, as evidenced by three (or more) of the following:
(1) recurrent excessive distress when separation from home or major attachment figures occurs or is anticipated (2) persistent and excessive worry about losing, or about possible harm befalling, major attachment figures (3) persistent and excessive worry that an untoward event will lead to separation from a major attachment figure (e.g., getting lost or being kidnapped) (4) persistent reluctance or refusal to go to school or elsewhere because of fear of separation (5) persistently and excessively fearful or reluctant to be alone or without major attachment figures at home or without significant adults in other settings (6) persistent reluctance or refusal to go to sleep without being near a major attachment figure or to sleep away from home (7) repeated nightmares involving the theme of separation (8) repeated complaints of physical symptoms (such as headaches, stomachaches, nausea, or vomiting) when separation from major attachment figures occurs or is anticipated
B. The duration of the disturbance is at least 4 weeks.
C. The onset is before age 18 years.
D. The disturbance causes clinically significant distress or impairment in social, academic (occupational), or other important areas of functioning.
E. The disturbance does not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and, in adolescents and adults, is not better accounted for by Panic Disorder With Agoraphobia.
Specify if: Early Onset: if onset occurs before age 6 years

Similar to SOP, Separation Anxiety Disorder made its formal appearance in the DSM-III (APA, 1987) and was modified to include a longer time frame from two to four weeks as well as collapsed symptoms such as excessive and recurrent distress as well as significant impairment (Allen, Lavallee, Herren, Ruhe, & Schneider, 2010).

Separation anxiety disorder is considered a common childhood disorder with prevalence rates between 3-5% with younger children having higher rates compared to adolescents (Silverman & Dick-Niederhauser, 2004). Although this is a common disorder, there have been relatively few studies examining the short and long term psychopathology of SAD in children and adolescents. One reason for this low number of controlled trials is the interchanging of the terms separation anxiety disorder and SOP over the past 20 years of research. Additionally, many studies have included school refusal in their samples as well, making it difficult to parse apart studies on SAD, SOP, and school refusal behavior. With that in mind, 73% of children with SAD presented with school refusal (Last, Francis, Hersen, Kazdin, & Strass, 1987). This may seem like a large percentage, however not all children with SAD will refuse to go to school many simply try to avoid it (Silverman & Dick-Niederhauser, 2004). Another feature of SAD is the high recovery rates compared to other disorders, ranging from 80-96% within 18 months to 4 years of initial diagnosis (Foley, Pickles, Maes, Silberg, & Eaves, 2004; Last, Perrin, Hersen, & Kazdin, 1996). Those that do not recover or seek appropriate treatment are at greater risk for long-term difficulties. In a long-term study comparing individuals with SAD, (with and without school refusal) as well as a general population control sample, those with SAD and school refusal tended to live with their parents longer, had more psychiatric consultations, and had fewer children. Therefore, the long-term outcomes of those with SAD, especially with comorbid school refusal, may lead to long-term social and emotional difficulties.

Sociodemographic differences with respect to SAD are similar to GAD and SOP. Some studies report higher rates of SAD in girls (Anderson, Williams, McGee, & Silva,

1987; Bowen et al., 1990; Costello, 1989; Last, Francis et al., 1987; March, Parker, Sullivan, Stallings, & Conners, 1997), whereas others report equal prevalence rates (Bird, Gould, Yager, Staghezza, & Canino, 1989; Francis, Last, & Strauss, 1987; Last, Perrin, Hersen & Kazdin, 1996). It appears that additional variables need to be examined with respect to SAD and gender differences. Some studies have also reported higher rates of SAD in children from lower socio-economic status (Last et al., 1992; Last, Francis et al., 1987; Valex, Johnson, & Cohen, 1989). However, reasons for this increase are unclear. In the US, multiple studies have examined SAD rates within different ethnicities including European American, African-American, and Hispanic American children. Results have indicated similar rates across ethnicities (Ginsberg & Silverman, 1996; Last, Perrin, 1993).

Separation Anxiety Disorder is also highly comorbid with other anxiety disorders and affective disorders. In some studies, up to 92% of children with SAD had a comorbid anxiety or affective disorder (Last, Francis et al., 1987). Other, more recent, studies found 50% of children with SAD having a comorbid anxiety disorder (Bowen et al., 1990). Just like GAD and SOP, depression is also common in children with SAD (Keller et al., 1992; Kovacs, Gastonis, Paulauskas, & Richards, 1989; Last et al., 1987; Ryan et al., 1987), again, with most cases of depression appearing after the onset of SAD.

Overall, SAD is considered one of the most common childhood anxiety disorders. A developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached is the core component to SAD. It often presents earlier than other anxiety disorders and recovery rates appear to be much higher. School refusal is often a characteristic of SAD, and long-term studies have concluded that

those with SAD and school refusal tend to have more social and emotional difficulties. Gender and ethnicity studies have reported conflicting or relatively low to no differences between groups of children and adolescents with GAD. Separation Anxiety Disorder, like other GAD and SoP, has high comorbidity rates with both other anxiety disorders and depression. Yet, just like GAD, it appears that SAD also precedes depressive symptoms, strengthening the need for research and early intervention.

ASSESSMENT OF ANXIETY DISORDERS

Assessing children with anxiety disorders is done in much the same way as adult assessment. The process may include diagnostic interviewing, self-report measures, and behavioral assessment, however developmental considerations must be made throughout the assessment process as childhood and adolescence is a rapidly changing period. Cognitive, developmental, and social factors must be examined to determine their influence on the development of an anxiety disorder. Additionally, parent data, including family history and parent-report measures are utilized in the diagnostic consideration of anxiety disorders in children.

Assessment of an anxiety disorder typically begins with a diagnostic interview with both the parent and the child. There are a number of diagnostic interviews, however the most comprehensive is the Anxiety Disorders Interview Schedule for Children (ADIS C/P; Silverman & Albano, 1996). The ADIS consists of separate parent and child structured interviews, which are conducted by a trained clinician. The Multi-Dimensional Anxiety Scale for Children (MASC; March, Parker, Sullivan, Stallings, & Conners, 1997) as well as the Screen for Child Anxiety related Emotional Disorders

(SCARED; Birmaher, Khetarpal, Cully, Brent and McKenzie, 1997) have good convergent validity between ADIS C/P diagnoses of SOP and separation anxiety disorder. The ADIS C/P and SCARED also have good convergent validity on GAD. Parent-child agreement on diagnostic interviews is somewhat low, as factors such as parental anxiety, parental accommodating behavior, impatience with the interview, and lack of rapport with the interviewer may impact results (Beidel & Turner, 2005; Langley, Bergman & Piacintini, 2002). Additionally, rates of parent-child agreement vary between anxiety disorders (GAD – 32%; Separation Anxiety Disorder – 25%; and SOP – 24.5%) as well as between other psychological disorders (depressive disorder – 7.7%; and ADHD – 25.3%) (Grills & Ollendick, 2003). Therefore, as with other disorders, best-practice recommendations include the use and synthesis of multiple instruments to arrive at the most valid diagnosis.

Another type of assessment modality is the use of self-report measures or inventories. These tend to be popular as they are typically less time intensive than a structured diagnostic interview and youth can typically complete these independently. Important variables to take into consideration when utilizing a self-report measure is the developmental appropriateness of the measure, the length of the measure, the reading level needed to complete the measure, as well as the scale descriptors ("often" vs "a lot"). Often, researchers should consider those variables when constructing a measure. Developmentally, anxious children as young as 2-3 years old have demonstrated the ability to describe themselves as anxious, afraid, and scared (Bretherton et al., 1986). Additionally, six-year-olds have demonstrated the ability to complete self-report measures of anxiety that correlate well with observer ratings (LeBaron & Zeltzer, 1984).

Popular diagnostic or screener examples of self-report anxiety measures include the Screen for Child Anxiety related Emotional Disorders (SCARED-C; Birmaher, Khetarpal, Cully, Brent and McKenzie, 1997), and the Spence Anxiety Scale for Children (SCAS; Spence, 1997). Both are examples of measures that take these developmental variables into consideration.

Observational data may also be utilized when considering a diagnosis of an anxiety disorder. Data collected from unstructured observations such as an antecedent-behavior-consequence (A-B-C) relationship, or more structured observation schedules such as the Direct Observation Form (DOF; McConaughy, 1985) or the Family Anxiety Coding Schedule (Dadds, Rapee & Barrett, 1994; Dadds et al., 1996) may be useful in identifying anxious from non-anxious children, again, developmental considerations are particular important when observational assessments are utilized. In studies of pediatric anxiety in youth aged 2-20 years old, younger children were more likely to exhibit overt stress such crying and screaming, whereas older youth exhibited groaning and flinching (Jay, Ozolins, Elliot, & Cadwell, 1983). Therefore, observational measures of anxiety in youth may not be ideal as developmental differences may impact how stress and anxiety manifest.

TREATMENT OF ANXIETY DISORDERS

Overall, anxiety disorders tend to have low rates of spontaneous recovery, with the exception of separation anxiety disorder. Results of an 8-year prospective study indicated only 1/3 to 1/2 of patients with SOP, GAD, or panic disorder achieve full remission after treatment (Yonkers, Bruce, Dyck, & Keller, 2003). Additional

longitudinal studies reported that nearly 50% of participants with an anxiety disorder later developed depression alone or comorbid depression and anxiety (Merikangas et al., 2003). Results of a longitudinal study of 3,107 adults indicated that 23% of those with an initial DSM-III diagnosis of an anxiety disorder continued to meet criteria 6 years later, additionally another 47% suffered from subclinical levels (Schuurmans et al., 2005). With this wealth of longitudinal data it is apparent that anxiety disorders may and often do persist for many years when not treated (Craske, 2003). Furthermore, the need for research and treatment early in life is critical, due to the fact that the majority of anxiety disorders have an onset in childhood and adolescence (Newman et al., 1996).

Treatment for anxiety disorders vary between pharmacotherapy and psychotherapy. With pharmacotherapy, benzodiazepines and serotonin reuptake inhibitors (SSRIs) have been shown to be effective for both short-term treatment and long term management (Seedat & Stein, 2004). With respect to psychotherapy, research has supported the idea that cognitive-behavioral therapy (CBT) is the most efficacious treatment for anxiety disorders. CBT interventions tend to emphasize cognitive restructuring, hierarchical desensitization, and exposure (Seedat & Stein, 2004, 2004). Cognitive restructuring involves the process of challenging the underlying cognitive beliefs and schemata associated with the client's anxiety disorder. These CBT treatments tend to utilize a framework consistent with Beck's cognitive model of anxiety (Clark & Beck, 2010).

CONCEPTUAL MODEL OF ANXIETY

Research on the biological, behavioral, and cognitive models has examined the multifaceted layers of anxiety disorders. Biological models have investigated not only the psychophysiological reactions including persistent elevated autonomic, such as elevated heart rate, but also an elevated basal level even in the absence of a feared or anxiety provoking situation (Barlow, 2002). Genetic factors have also been shown to be a major contributing factor to anxiety with estimates of heritability ranging from 30-40% across all anxiety disorders (Barlow, 2002). Barlow's (2002) meta-analysis of family and twin studies supported the concept that there is an overarching vulnerability for anxiety that is inherited, rather than a genetic predisposition for specific anxiety disorders. Barlow, Allen, and Choate (2004) labeled this vulnerability a "negative affect syndrome", yet, as others have pointed out, environmental (behavioral) and cognitive factors may also interact with this genetic predisposition. It is this interaction that allows for the expression of specific anxiety disorders.

Behavioral models including classical conditioning and later the Two Factor Theory of conditioning evaluated how fear was an acquired response which persisted due to the reinforcement of avoidance, however it did not account for why some individuals acquired a phobia and why some didn't when presented with a similarly traumatic experience (Rachman, 1977). Eventually, researchers concluded that there must be some underlying cognitive constructs that help better explain the development and maintenance of anxiety (Brewin, 1988; Davey, 1997).

For the last 30 years the Tripartite Model of Anxiety, which is composed of (1) physiological responses, (2) subjective responses (also known as the cognitive dimension), and (3) behavioral responses, has been the dominant model for the

conceptualization of anxiety disorders in children adolescents and adults (Lang, 1968). This second step that encompasses the cognitive role, the subjective response, allows us to understand why anxiety may persist, even in the absence of danger or threat (Clark & Beck, 2010).

COGNITIVE MODEL OF ANXIETY AND COGNITIVE VULNERABILITY

The underlying theme of the cognitive model of anxiety involves the simple idea that "The way you think affects the way you feel (Clark & Beck, 2010)". Based on this statement, it is safe to assume that when therapy focuses on how a client conceptualizes or thinks about their anxiety or a triggering situation, and in turn how that affects their mood, a conceptual model for treatment becomes more apparent. Therefore our cognitions are a vital part in understanding what reinforces and maintains anxiety disorders.

The concept of heightened vulnerability is a core component in the cognitive model of anxiety (Beck, Emery, & Greenberg., 1985). As described in the following definition, vulnerability is:

> a person's perception of himself as subject to internal or external dangers over which his control is lacking or is insufficient to afford him a sense of safety. In clinical syndromes, the sense of vulnerability is magnified by certain dysfunctional cognitive processes. (Beck, Emery & Greenberg, 1985, p. 67-68)

The cognitive vulnerability model describes a process of cognitive evaluation in terms of a two-step process, first the primary appraisal of threat, then the secondary elaborative reappraisal of the threat (Clark & Beck, 2010). In the cognitive vulnerability model,

those with anxiety tend to perceive the severity of harm in a much more unrealistic and overestimated fashion, which eventually leads to avoidance of said stimuli. This process occurs during the primary appraisal of threat (Rachman, 2004). Additionally, those with high vulnerability for anxiety tend to underestimate their overall ability to cope with the perceived or realistic threat (Beck et al., 1985, 2005). Therefore, when they enter into the second phase, the secondary elaborative reappraisal, they immediately amplify the perception of threat resulting in a heightened state of anxiety as they are unable to cope with the distress of the stimuli. As a result, those individuals with cognitions of high threat probability and low coping tend to have higher anxiety compared to those who evaluate threats as low threat probability and high coping (Clark & Beck, 2010). This increased susceptibility, or vulnerability, to anxiety reinforces their cognitions or core beliefs (schemata) that one is personally vulnerable or helpless, and also, that they are ill-equipped with suitable coping strategies to adequately deal with a threat.

In Beck's cognitive model of anxiety, schemata "represent beliefs, rules, and assumptions that are relevant to making inferences and interpretations of threat (Clark & Beck, 2010, p.45)." In general, most people tend to develop schemata that are flexible and allow for the open interpretation of threatening stimuli (Price, 2007). However, in people with anxiety disorders maladaptive schemata are activated once a threat is detected. As a result of this heightened threat mode, people with anxiety tend to have heightened autonomic arousal, such as increased heart rate, that is proportional to their perceived estimate of danger (Beck et al., 1985, 2005). They also tend to have defensive inhibitory responses that include avoidance, escaping, freezing, or fainting. Additionally they tend to make more cognitive processing errors such as minimization

(underestimation of positive personal resources), selective abstraction (focusing on their weaknesses), magnification (views flaws as unproportional weaknesses), or catastrophizing (threats have terrible consequences). As a result, once these threat schemata are activated, it would be extremely difficult for an individual with anxiety to process threat-related information in any other way (Clark & Beck, 2010). Bogles and Zigterman (1999) examined cognitive schemata in 9-18 year olds by eliciting free and closed responses to stories detailing a social, separation, or generalized scenario. As predicted, and in line with Beck's vulnerability model, anxious children judged the story situations as more dangerous on closed responses compared to the control groups. Additionally, anxious children estimated their influence and coping competency to be lower than controls in both the open and closed responses (Bogles & Zigterman, 1999).

ANXIOGENIC SCHEMATA OF COGNITIVELY VULNERABLE YOUTH

In recent years, research has focused on the cognitive foundations of emotional disorders has been on the rise. This increased interest is due to a number of reasons however most importantly is the emphasis on how cognitive factors influence the design and effectiveness of psychological interventions. Research surrounding the cognitive aspects of anxiety has lagged behind in terms of other diagnoses, most notably depression. Additionally, research into the cognitive vulnerabilities and anxiogenic schemata of children and adolescents has been extremely limited, perhaps in part due to an assumption that younger children are not mature enough to evaluate their own cognitions (Piaget, 1932). In other words, children and adolescents may lack the ability to think about their thoughts. However, additional studies investigating childhood depression (Garber & Robinson, 1997; Jaenicke, Hammen, Zupan, Hiroto, Gordon,

Adrian, Burge, 1987), anxiety (LeBaron & Zeltzer, 1984), and externalizing disorders (Dodge, 1986, 1993; Crick & Dodge, 1994) have concluded that youth as young as six are able to accurately report their thoughts and feelings, both verbally and through questionnaire measures. Previous studies have concluded that children tend to understand their own feelings more as they get older (Barenboim, 1981; Shirk, 1988). Additional studies of self-concept development have concluded that self-representation and theory of mind begin around age four (Nelson & Fivush, 2004; Nelson et al., 2003). Given the numerous studies indicating the ability of children to identify thoughts and feelings, there appears to be a foundation for further exploration of the cognitive vulnerability model of anxiety.

Clark and Beck (2011) identified maladaptive cognitive schemata as the central cognitive process of anxiety. These maladaptive cognitive schemata activate cognitions of threat and vulnerability that result in "attentional bias for threat, heightened focus on internal cues of anxiety, automatic inhibitory behaviors, secondary negative evaluation of one's emotional state and performance, and ineffective use of safety behaviors (Clark & Beck, 2010, p. 350)." In other words, anxious individuals tend to interpret seemingly trivial situations as threatening because their internal cues are searching for anxious cues that reinforce their cognitive beliefs, or anxiogenic schemata. As a result, each anxiety disorder holds their own maladaptive schemata that emphasize the central tenant of vulnerability.

Anxiogenic Schemata of Generalized Anxiety Disorder

Beck's model for anxiogenic schema development can be explained in the automatic processing phase in GAD. This automatic processing phase entails selectively attending to threatening stimuli while simultaneously making biased interpretations about the threat, even when presented with ambiguous or non-threatening information. It is in this phase that schema activation occurs and becomes part of the process of heightened vulnerability for anxiety (Macleod & Rutherford, 2004). There are four main schema categories outlined in Beck's cognitive model of anxiety; (1) general threat, (2) personal vulnerability, (3) intolerance of uncertainty, and (4) metacognition of worry. Categories and illustrative examples are detailed in Table 5, taken from Clark and Beck (2011).

Table 5: Schema Structures: Generalized Anxiety Disorder

General Threat **(Beliefs about probability and consequences of threats to one's physical or psychological security)**	***Personal Vulnerability*** **(Beliefs about helplessness, inadequacy, lack of personal resources to cope)**	***Intolerance of Uncertainty*** **(Beliefs about the frequency, consequences, avoidance, and unacceptability of uncertain or ambiguous negative events)**	***Metacognition of Worry*** **(Beliefs about the positive and negative effects of worry and its controllability)**
Negative outcomes (events) that threaten important life goals are more likely to happen to me.	I would be unable to cope with the negative event if it occurred.	Uncertainty will increase the stress and adverse effects of negative events.	Worry helps me solve problems and prepare for the worst.
If I experience a negative event that threatens an important life goal, it will have a serious, long-term effect on me.	I can't control whether this negative event happens or its effects on me.	It is important to be ready for any unexpected bad things that could happen to you.	If I worry, it means that I am taking a situation seriously.
The distress and anxiety will be severe if this negative event happens	I am weak and helpless in the face of this event.	If I can reduce the doubt and ambiguity of a potentially negative situation, I will be better able to cope with it.	If I were a stronger person, I would be able to control my worries.
			I experience a great deal of anxiety and distress because of uncontrollable worry.

Maladaptive schemata about personal threat, vulnerability, risk, and uncertainty have been consistently hypothesized by cognitive theorists to be central tenants to the psychopathology of chronic worry (Beck et al., 1985, 2005; Dugas, Gagnon, et al., 1998;

Freeston et al., 1994, Wells, 1995, 1999). Chronic and excessive worry is not only a major characteristic to GAD and is also a diagnostic criterion for GAD in the DSM-IV. The experience of worry culminates from the underlying cognitive schemata and it is these positive and negative beliefs about worry that play a key role in the dysfunctional metacognitive process that increases vulnerability. And, although these cognitive schemata are a major characteristic of the cognitive model of anxiety, there remains a dearth of self-report schema questionnaires that examine the vulnerability schema factors listed in the table above for children as well as adults (Clark & Beck, 2010). However, measures for specific cognitive schema factors such as the Intolerance of Uncertainty Scale (IUS; Freeston et al., 1994) have been shown to differentiate those with and without GAD (Dugas et al., 1997; Dugas, Gagnon, et al., 1998; Dugas, Gosselin & Ladouceur, 2001; Freeston et al., 1994). Additionally, those patients with GAD scored significantly higher on the IUS compared to patients with panic disorder, demonstrating the divergent validity between the two disorders (Dugas et al., 2005). Yet, a number of researchers ascribe to the assumption that although intolerance of uncertainty is an important factor in GAD, it is unlikely that this factor is unique to GAD, and therefore further investigation into this schema should be conducted (OCCWG, 2003; Tolin, Abramowitz, Brigidi, & Foa, 2003).

Additional measures including the Meta-Cognitions Questionnaire (MCQ) and Consequences of Worry Scale, used to assess beliefs about worry and unwanted intrusive thoughts, have also been shown to have select scales that differentiate those with GAD compared to controls or other anxiety disorders. Specifically, subscales that measure the negative beliefs about the uncontrollability and dangers of thoughts tended to correlate to

higher incidences of GAD (Cartwright-Hatton & Wells, 1997; Montorio, Wetherell, & Nuevo, 2006). Therefore, constructing self-report questionnaires to investigate the main factors of GAD listed above would fill a void in the research surrounding the cognitive model of anxiety as well as its relation to cognitive vulnerability. Furthermore, due to the fact that the majority of anxiety disorders develop in childhood and adolescence, it appears more practical to construct a measure that identifies these maladaptive cognitive schemata of vulnerability in children and adolescents.

Anxiogenic Schemata of Social Phobia

Maladaptive schemata for SOP are typically apparent in social situations, additionally these schemata reinforce the core feature of vulnerability in SOP; negative evaluation by others. It is during these social situations where an attentional shift occurs, prompting social phobic individuals to process their internal and external cues which provide feedback that there is a threat. At this point, both verbal and nonverbal cues from others may be interpreted as negative; in fact these negatively biased interpretations are given priority. During this time, self-focused attention of one's own social interaction becomes salient and personal behavioral cues that may be seen as a weakness (shaking, sweating) may be interpreted as a loss of emotional control. Due to this self-focus, other social information that may disconfirm their maladaptive schema will be ignored. See Table 6 below for the core cognitive schemata associated with SOP as well as illustrative examples taken from Clark and Beck (2011).

Table 6: Schema Structures: Social Phobia

Core beliefs of helpless, weak, or inferior social self	*Beliefs about others*	*Beliefs about disapproval*	*Beliefs about social performance standards*	*Beliefs about anxiety and its effects*
I'm boring	People are critical of others	It is awful when others disapprove of you	It is important not to show any signs of weakness or loss of control to others	Anxiety is a sign of emotional weakness and loss of control
I'm not a friendly person	In social situations people are always forming evaluations of each other	It would be horrible if others thought I was weak or incompetent	I must appear confident and interpersonally competent in all my social interactions	It is important not to show any signs of anxiety around others
People don't tend to like me	Individuals are constantly scrutinizing other people, looking for their flaws and weaknesses	To embarrass yourself in front of others would be unbearable, a personal catastrophe	I must always sound intelligent and interesting to others	If people see that I'm blushing, perspiring, have shaking hands, etc., they will wonder whats is wrong with me
I'm socially awkward				I can't stand to feel anxious around others
I don't fit in				

There has been substantially more research investigating SOP schemata when compared to GAD. Support for a maladaptive schema for SOP have reported a significant difference in the social evaluative cognitions, which are said to be specific to SOP, between controls, anxious individuals, and individuals with SOP (Becker et al., 2001; Beidel et al., 1985; Turner & Beidel, 1985; Turner et al., 1986). Additionally, socially anxious individuals have been found to have more negative-evaluative cognitions

and believed their negative thoughts more than other individuals with anxiety disorders (Magee & Zinbarg, 2007; Stopa & Clark; 1993). Additional research investigating spontaneous negative images of recent social situations concluded that, during their semi-structured interviews, socially phobic individuals reported significantly more negative images of how they believed they appeared to others when compared to low anxious individuals (Hackman et al., 1998). Support for a maladaptive cognitive schema for SOP initially appears to be strong, however additional studies have resulted in inconsistent data (de Jong, 2002; Lundh & Ost, 1997; Rapee et al., 1994; Rinck & Becker, 2005). For example, recall bias for negative social threat words did not result in significant differences when comparing socially phobic and nonanxious controls (Lundh & Ost, 1997). Furthermore, a cognitive threat bias for the recall of complex social passages was not found to be significant between socially phobic individuals and controls (Brendle & Wenzel, 2004; Wenzel & Holt, 2002). Overall, the support for a cognitive maladaptive schema for SOP warrants additional research. Additionally, none of the above mentioned studies investigated these cognitive vulnerability schemata in children or adolescents. As a result, a gap in the research also exists in cognitive schema research with regard to child and adolescent beliefs.

Anxiogenic Schemata of Separation Anxiety Disorder

Separation Anxiety Disorder is the only anxiety disorder that can only be diagnosed in childhood. As a result, many of the prominent cognitive models of anxiety do not include SAD, as they tend to focus solely on adults (Barlow, 2002; Clark & Beck, 2010). As a result, research supporting the cognitive model of anxiety with children is sparse. Select studies have investigated the role of cognitions in children with anxiety

disorders, including SAD (Bogels & Zigterman, 2000; Vasey, 1993; Vasey, Crnic & Carter, 1994). Results have concluded that children do in fact have worrisome thoughts as young as 5 years old and that these thoughts become more complex and more prevalent as the children age (Vasey, 1993; Vasey, Crnic & Carter, 1994). Additionally, when exposed to ambiguous situations, anxious children had more maladaptive cognitions and had lower coping estimates when compared to a control group (Bogels & Zigterman, 2000) which is consistent with the Beck's cognitive vulnerability model of anxiety (see Table 7). Due to the lack of cognitive-based research surrounding SAD, developmental models appear to be the dominant theory for the development and maintenance of SAD.

Table 7: Schema Structures: Separation Anxiety Disorder

Overestimation of danger of being left	*Underestimation of independent functioning*	*Overestimate the likelihood of separation*	*Separation is dangerous*	*Wouldn't be able to cope with separation*

Attachment theory and temperament appear to hold the most credibility when considering the social-developmental process of how infants and children manage their feelings of separation and strangers (Eisen & Schaefer, 2005). Attachment is described as the enduring emotional bond between an infant and their caregiver or parent. This bond is said to be a foundation for how individuals interact and adapt to their environment (Bowlby, 1969, 1982). Bowlby (1969, 1982) characterized the security of the attachment as being directly associated with the quality of the caregiving (Ainsworth, Blehar, Waters, & Wall, 1978). A securely attached relationship is one in which children are more self-confident and trusting in their interpersonal relationships, have fewer negative emotions, and tend to display better social skills when compared to their

insecurely-attached peers (Englund, Levy, Hyson, & Sroufe, 2000; Kochanska, 2001). Parents' of securely-attached children also tend to have a more positive attitude, are more sensitive and mutually supportive (DeWolff & van IJzendoorn, 1997). Sixty-five percent of infants and toddlers are said to have secure-attachment to their mother (Shaffer, 2002). Conversely, insecure parent child attachment may be the result of insensitive or inconsistent parenting (Isabella, 1993). These relationships tend to result in children with higher anxiety and result in families with higher control and conflict and less warmth and support, resulting in an insecure-ambivalent or resistant attachment (Baumrind, 1989; Dumas, LaFreniere, & Serketich, 1995; Siqueland, Kendall, & Steinberg, 1996). Some researchers have associated Separation Anxiety Disorder with this insecure-ambivalent parent-child attachment style (Main, Kaplan & Cassidy, 1985; Ollendick, 1998), as well as other child and adolescent anxiety disorders (Cassidy & Berlin, 1994; Cowan, Cohn, Pape-Cowan, & Pearson, 1996). These insecure-ambivalent attachment styles comprise of approximately 15% of parent-child attachment relationships (Ainsworth, Blehar, Waters, & Wall, 1978).

Some temperament profiles have also been associated with Separation Anxiety Disorder (Rubin & Mills, 1991). Temperament examines the way people react to novel and challenging situations and events (Kagan, 1989). There are various dimensions including activity level, rhythmicity, approach withdrawal, mood, distractibility, and persistence of attention that are said to account for easy, difficult, and slow-to-warm-up temperaments (Thomas & Chess, 1977). Easy temperaments, which account for approximately 60% of 1-year olds, are associated with greater adaptability and are at a lower risk for developing anxiety disorders including Separation Anxiety Disorder

(Caspi, Henry, McGee, Moffitt, & Silva, 1995; Chess & Thomas, 1984). Difficult temperaments account for approximately 15% of infants and tend to have negative reactivity and are later associated with more externalizing problems such as ADHD and ODD (Maziade et al., 1990; Shaffer, 2002; Thomas & Chess, 1977). Children with difficult temperaments during childhood tend to have more difficulty adjusting to school, have more aggressive behaviors, and tend to have more problems with interpersonal relationships with peers and family members (Lytton, 1990; Thomas, Chess, & Korn, 1982). Slow-to-warm temperaments account for approximately 23% of infants (Shaffer, 2002; Thomas & Chess, 1977).

Current models suggest that the interaction between temperament and attachment, along with additional variables including stress and poverty, play important roles in the development of anxiety disorders, and separation anxiety in particular (Eisen & Schaefer, 2005). As a result, a self-report measure assessing childhood experiences of separation anxiety was constructed. The Separation Anxiety Symptom Inventory (SASI, Silove & Minicavasagar, 1993) later identified a link between childhood separation anxiety and panic disorder later in adolescence and into adulthood (Manicavasagar et al., 2000; Silove et al., 1993, 1995). However a recent 7 year-longitudinal study concluded those with SAD were no more likely to develop Panic Disorder compared to other anxiety disorders (Aschenbrand, Kendall, Webb, Safford, & Flannery-Schroeder, 2003).

Due to the prominence of attachment and temperament theories in SAD, cognitive theories of anxiety, specifically those related to vulnerability have not been examined to the same degree. Only one known study has investigated maladaptive cognitive schemata in children with Separation Anxiety Disorder (Bogels & Zigterman, 2000). In

their study, Bogels and Zigterman (2000) developed nine ambiguous scenarios, three of which focused on separation from a caregiver. Children aged 9-18 years old provided free- and closed-responses to the ambiguous stories. The study identified two main categories for the children's dysfunctional cognitions concerning separation anxiety, both of which load onto the cognitive vulnerability model of anxiety; (1) overestimation of danger of being left and (2) underestimation of independent functioning. Illustrative examples provided include "If only my mother doesn't die" and "I can't make it on my own," respectively. Results supported the cognitive model of vulnerability of anxiety in that children with anxiety tend to have more maladaptive cognitions related to ambiguous scenarios. Although Bogels & Zigterman (2000) did not have enough power to differentiate specific cognitive schemata related to each anxiety disorder they examined (GAD, SOP, and SAD) their study supports Beck's cognitive theory of anxiety in children with SAD.

COGNITIVE BELIEFS / SCHEMA DEVELOPMENT AND MEASUREMENT

Research examining anxious cognitive beliefs, or schemata, in children and adolescents is extremely limited. To date, only one known study has examined anxious cognitive schemata in youth with GAD, SOP, and SAD (Bogels & Zigterman, 2000). In their study however, Bogels and Zigterman utilized a free response measure of ambiguous scenarios to evaluate anxious cognitive schemata in youth. Youth provided their interpretation of the story through open and closed responses. Researchers coded them for dysfunctional cognitions to ambiguous situations. This type of assessment was incredibly time intensive to evaluate as each child's free response was coded individually. Additionally, although their research was guided by Beck's cognitive

vulnerability model of anxiety (Beck, 1985), insufficient power limited them from determining specific schemata for the three anxiety disorders they evaluated (Bogels & Zigterman, 2000). Other studies have investigated schemata with regard to alternative schema theory, most notably Young's Maladaptive Schema Theory (Young, 2003). However, these broad schema questionnaires do not take into consideration the cognitive vulnerability model of anxiety (Young, 2003). Instead they utilize broad schema questionnaires that have specific factors that predict anxiety disorders (Van Vlierberghe, Braet, Bosmans, Rosseel, & Bogels, 2009). With the exception of the information gleaned from Bogels and Zigterman (2000), anxiogenic schema research with respect to Beck's cognitive vulnerability model of anxiety in children is relatively underdeveloped. This is surprising, as his model was originally proposed in 1985 (Beck, 1985). Due to the limited research in the area schemata associated with anxiety disorders in children and adolescents, the national cost of anxiety disorders both fiscally and psychologically, and the need to identify and treat those affected as early as possible, the development and validation of an appropriate measure is warranted.

Research on cognitive schemata and schema measurement in other areas of pathology may be utilized to help guide the current measure development, as it could inform how cognitive schemata are conceptualized. Additionally, by examining these additional areas of cognitive schema research, the current researchers may explore more informed methods for identifying and validating anxious cognitive schemata that maintain vulnerability. One area of research that may parallel Beck's cognitive vulnerability theory of anxiety is his cognitive theory of depression. Beck proposed that vulnerability to depression is influenced by three cognitive concepts: the cognitive triad,

schemata, and cognitive distortions. Depressogenic schemata are similar to anxiogenic schemata as they inform and provide bias content and information to reinforce negative core beliefs. As described in Segal (1988) these depressogenic schemata may be activated during a depressive mood, as well as when a depressive mood was absent as the underlying vulnerability model supports this depressive schema. One such measure that seeks to evaluate the schema evident in depressed individuals is the Dysfunctional Attitude Scale (DAS; Weissman, 1979). Weissman's scale is a 40-item self-report inventory that seeks to evaluate the level of agreement between behavior statements and feelings of self-worth, a core component to Beck's cognitive model of depression (Beck, 1984; Giles & Rush, 1983). However, although studies have concluded that elevated scores on the DAS are highly predictive of a depressive disorder, they are also somewhat elevated in a schizophrenic population. This supports the idea that the DAS may not be tapping into a specific depressive schema, but rather vulnerability factors that reflect general distress (Hollon et al., 1986; Segal &Shaw, 1986b). Additional measures of depressive schema include the Automatic Thoughts Questionnaire (ATQ; Hollon & Kendall, 1980). The ATQ is a 30-item self-report questionnaire that measures the frequency of negative thoughts. It is also informed by Beck's cognitive model of depression (1967) and is considered more of a state measure of depressive thoughts. These two measures have demonstrated a consistent ability to evaluate depressive schema that increases vulnerability in currently-depressed individuals, however, as Beck described, cognitive schemata for depression should also be evident even when a person with depression has recovered as it is part of their underlying vulnerability (Beck, 1967). Unfortunately, researchers have concluded that these two self-report measures may not be

sensitive enough to identify depressogenic schema in formerly-depressed individuals (Hedlund & Rude, 1995), which fails to support Beck's cognitive vulnerability of depression model (Beck, 1967).

Laboratory tasks have also been evaluated to determine their sensitivity in examining depressive schemata. Rude and colleagues evaluated the effectiveness of laboratory tasks in identifying cognitive vulnerability to depression in never-depressed and formerly-depressed individuals (Rude, Covich, Jarrold, Hedlund, & Zentner, 2001). Laboratory tasks such as the Emotional Stroop Task, Scrambled Sentences Test (SST; Wenzlaff, 1988; 1993), and an Incidental Recall Task were shown to differentiate never-depressed and formerly-depressed individuals better than a questionnaire (Rude et al., 2001). As a result, researchers were able to support Beck's cognitive vulnerability model for depression by demonstrating that even those who had formerly been depressed still held negative schema that increase their vulnerability.

Due to the limited available research evaluating anxious cognitive schemata, the current researcher sought to first determine if currently-anxious children and adolescents hold anxious cognitive schemata specific to each anxiety disorder. Beck's cognitive vulnerability model for anxiety holds that anxiogenic schemata develop as a result of preferential attention and memory for anxious stimuli and events. Additionally, those with cognitive vulnerability for anxiety should also hold more schema-congruent bias when presented with a threatening or dangerous situation. As a result, each anxiety disorder is hypothesized to have unique cognitive schema-structures that reinforce anxious vulnerability (Beck, 1967; Riskind, 1997). Because depressogenic questionnaires have demonstrated their effectiveness in identifying vulnerability in the schema of

currently-depressed individuals, the current study seeks to first evaluate the anxious cognitive schemata in youth to determine if unique anxiogenic schemata are evident in youth with current anxiety disorders, specifically GAD, SOP, and SAD.

CHAPTER SUMMARY

In summary, anxiety disorders are the most prevalent and costly psychological disorder in the US (Dupont et al., 1996; Greenburg et. al, 1999; Kessler, Chiu, Demler, &Walters, 2005). Beck's cognitive model of anxiety has identified maladaptive cognitive schemata as a critical pathway for increased vulnerability in anxiety disorders in adults, however very little research has investigated these anxiogenic schemata in either adults or youth. Further, research into the area of maladaptive cognitive schemata in anxiety may lead to more informed treatments, similar to how cognitive schema research in depression has identified factors related to increased vulnerability such as hopelessness and helplessness. Because anxiety disorders tend to initially develop in childhood and adolescence, the current study investigated anxiogenic schemata in anxious and non-anxious youth. Previous research on anxiogenic schemata in youth has been minimal, and limited to free response, negative or emotional words or images, ambiguous scenarios, or broad schema questionnaires that contain factors that predict anxiety disorders. Schema and vulnerability research in other areas, specifically depression, have supported Beck's cognitive vulnerability model of depression using both questionnaires as well as laboratory tasks. Due to a growing need to understand cognitive vulnerability factors of anxiety a questionnaire that focuses on current-anxious schemata in youth was warranted. Overall the development and validation of a cognitive vulnerabilities schema questionnaire for anxious youth would contribute to the current

cognitive vulnerability model of anxiety in addition to determining maladaptive schemata present in three major anxiety disorders in youth: GAD, SOP, SAD.

Chapter 3: Method

OVERVIEW OF THE DISSERTATION STUDY

The need for additional research into anxiogenic schema in youth is warranted. This investigation consisted of three phases. The first phase focused on the initial development of the Cognitive Vulnerability Schema Questionnaire for Anxious Youth (CVSQ-AY), which is an instrument developed to measure anxiogenic schema in youth. The items on the instrument were generated from an extensive review of the literature, initial clinical writing sessions, developmental focus groups, clinician ratings, and youth focus groups.

The second phase consisted of the administration of the initial 46-item version of the CVSQ-AY (see Appendix J), the SCARED which is a self-report instrument that measures anxiety across three domains (GAD, SOP, SAD) and select items from the Young Schema Measure, a self-report questionnaire that measures schema. The responses on the CVSQ-AY were then used to identify a factor-solution best suited for the instrument as well as determine final items to retain.

In the third phase, the same group of participant responses on the CVSQ-AY from phase two were re-scored onto the scale scores based on the final version of the instrument. Final reliability and descriptive analyses were then conducted. This data may be viewed in the results chapter.

Ethical Considerations

All participation was voluntary, and participants were informed that the purpose of this research study was to better understand anxiety in youth (see Appendixes L & M). The ethical guidelines put forth by the American Psychological Association and the

University of Texas' "Policies and Procedures Governing Research with Human Subjects" were strictly adhered to in order to insure the ethical treatment of all participants. Furthermore, this study was approved by the University of Texas Institutional Review Board, Texas Child Study Center, and community organizations in which data was collected.

PARTICIPANTS

There were three sources from which participant data was collected for the dissertation study. A total of 280 participants were collected from the following sources, which will be described in further detail below: (Source 1: Anxiety Study) an ongoing anxiety treatment study examining the effects of an additional parent component to a 12-week CBT treatment for anxious youth (n = 23), (Source 2: TCSC) an outpatient clinic that employs both psychologists and psychiatrists conducting therapy and medication management (n = 99), and (Source 3: Community) representative sample from the community (n = 158). Participants in the TCSC and Community samples were initially provided a small prize for youth aged 7-12 and a $5 Target gift card for youth aged 13-17. However, interest and response rates were initially low, so all participants in the TCSC and Community samples were provided a $5 gift card for their participation.

Information in Table 8 obtained from the 280 participants conveys demographic data about each group collected from the demographic information survey (see Appendix K).

Table 8: Demographic Characteristics of All Participants

Demographic Characteristics	All Participants (*N*= 280) N(%)	Anxiety Study (*n*= 23) n(%)	TCSC (*n*= 99) n(%)	Community (*n*= 158) n(%)
Gender				
Male	127(36.60%)	9(39.40%)	45(45.46%)	73(46.20%)
Female	151(43.50%)	14(60.87%)	53(53.53%)	84(53.16%)
Age				
7	7(2.50%)	0(0.00%)	2(2.02%)	5(3.16%)
8	30(10.71%)	1(4.35%)	22(22.22%)	18(11.39%)
9	27(9.64%)	6(26.09%)	8(8.08%)	13(8.22%)
10	31(11.07%)	4(17.39%)	5(5.05%)	22(13.92%)
11	22(7.86%)	6(26.09%)	6(6.06%)	10(6.33%)
12	27(9.64%)	2(8.70%)	11(11.11%)	14(8.87%)
13	23(8.21%)	1(4.35%)	11(11.11%)	11(6.96%)
14	35(12.50%)	1(4.35%)	16(16.16%)	18(11.39%)
15	23(8.21%)	0(0.00%)	11(11.11%)	12(7.59%)
16	15(5.36%)	0(0.00%)	5(5.05%)	10(6.33%)
17	22(7.86%)	2(8.70%)	13(13.13%)	7(4.43%)
Biological Child				
Yes	223(79.64%)	22(95.65%)	80(80.80%)	121(76.58%)
No	57(20.36%)	1(4.35%)	19(19.19%)	37(23.42%)
Grade				
Elementary	117(41.79%)	17(73.91%)	34(34.34%)	66(41.77%)
Middle	85(30.36%)	4(17.39%)	33(33.33%)	48(30.38%)
High	59(21.07%)	2(8.70%)	29(29.29%)	28(17.72%)

Table 8: Demographic Characteristics of All Participants Continued

Demographic Characteristics	All Participants (*N*= 280) N(%)	Anxiety Study (*n*= 23) n(%)	TCSC (*n*= 99) n(%)	Community (*n*= 158) n(%)
Ethnicity				
Caucasian	170(60.71%)	18(78.26%)	64(64.64%)	88(55.69%)
Hispanic	51(18.21%)	3(13.04%)	24(24.24%)	24(15.19%)
African-Am.	21(7.50%)	0(0.00%)	6(6.67%)	15(9.49%)
Asian-Am.	12(4.29%)	0(0.00%)	1(1.01%)	11(6.96%)
Native-Am.	1(0.36%)	0(0.00%)	1(1.01%)	0(0.00%)
Other	25(8.93%)	2(8.70%)	1(1.01%)	7(4.43%)
Parent Education				
High School	31(11.07%)	1(4.34%)	15(15.15%)	15(9.49%)
Some College	72(25.71%)	2(8.70%)	32(32.32%)	38(24.05%)
College Degree	111(39.64%)	15(65.22%)	35(35.35%)	61(38.61%)
Masters	34(12.14%)	2(8.70%)	11(11.11%)	21(13.29%)
Doctorate/Prof	12(4.29%)	2(8.70%)	2(2.22%)	8(5.06%)
Marital Status				
Married	186(66.43%)	17(70.39%)	65(65.65%)	104(65.82%)
Single	29(10.36%)	2(8.70%)	13(13.13%)	14(8.86%)
Living w/partner	1(0.36%)	0(0.00%)	1(1.11%)	0(0.00%)
Divorced	43(15.36%)	2(8.70%)	15(15.15%)	26(16.46%)
Widowed	4(14.29%)	0(0.00%)	3(3.33%)	1(0.63%)
Child Diagnosis				
Yes	123(43.92%)	23(100%)	83(83.83%)	19(12.02%)
No	142(50.71%)	0(0.00%)	16(16.16%)	126(79.75%)

Table 8: Demographic Characteristics of All Participants Continued

Demographic Characteristics	All Participants (*N*= 280)	Anxiety Study (*n*= 23) n(%)	TCSC (*n*= 99) n(%)	Community (*n*= 158) n(%)
Household Income				
<15,000K	3(1.07%)	0(0.00%)	2(2.22%)	1(1.27%)
15-35K	3(1.07%)	3(13.04%)	19(19.19%)	23(14.56%)
35-50K	45(16.07%)	0(0.00%)	15(15.15%)	16(10.13%)
50-75K	31(11.07%)	3(13.04%)	19(19.19%)	17(10.76%)
75-100K	49(17.5%)	5(21.74%)	14(14.14%)	24(15.19%)
Over 100K	86(30.71%)	9(39.13%)	28(28.28%)	49(31.01%)
Not Reported	20(7.14%)	3(13.04%)	2(2.22%)	15(9.49%)
Other	8(2.86%)	1(4.34%)	15(15.15%)	104(65.82%)
Diagnosis**				
GAD	28(10.00%)	20(86.96%)	8(8.08%)	0(0.00%)
SOP	13(4.39%)	13(56.52%)	0(0.00%)	0(0.00%)
SAD	11(3.93%)	9(39.13%)	2(2.22%)	0(0.00%)
Unspecified Anxiety	19(6.79%)	0(0.00%)	19(19.19%)	0(0.00%)
OCD	11(3.93%)	1(4.35%)	10(10.10%)	0(0.00%)
Adjustment Disorder	5(1.79%)	0(0.00%)	5(5.05%)	0(0.00%)
Depression/ MDD	28(10.00%)	0(0.00%)	27(27.27%)	1(0.63%)
ADHD	47(16.79%)	2(8.70%)	36(36.36%)	9(5.70%)
Learning Disability	4(1.43%)	0(0.00%)	3(3.33%)	1(0.63%)
Mood Disorder /Bipolar	14(5.00%)	0(0.00%)	13(13.13%)	1(0.63%)
PTSD	5(1.79%)	0(0.00%)	5(5.05%)	0(0.00%)
Mild Autism Aspergers	7(2.50%)	0(0.00%)	6(6.06%)	1(0.63%)
Clinically Elevated SCARED-C	142(50.71%)	15(65.22%)	59(59.59%)	57(43.31%)
SCARED-C GAD	79(28.21%)	10(43.48%)	41(41.41%)	28(17.72%)
SCARED-C SAD	82(29.29%)	9(39.13%)	34(34.34%)	39(24.68%)
SCARED-C SOP	67(23.93%)	5(21.78)	34(34.34%)	28(17.72%)

**The diagnoses listed do not reflect primary vs. secondary diagnoses, simply if they were currently diagnosed.

Source 1: Anxiety Study Group

Twenty-three clinical participants were recruited from an ongoing anxiety treatment study at The Texas Child Study Center. Youth in the clinical sample had a primary diagnosis of GAD, SOP, SAD as determined in the study intake interview with an ADIS CSR of at least 4. Additionally, these participants were not in need of in-patient care. Excluded youth included those that do not speak English, youth that could not read and write in English, and those with an AXIS II disorder. The demographic characteristics for the Anxiety Study Group (n = 23) can be seen in Table 8.

Source 2: Outpatient Treatment Center Group

A total of 99 participants were recruited from the outpatient mental health treatment center, Texas Child Study Center (TCSC). Participants were current or new patients being seen by a psychologist or psychiatrist at TCSC for a range of psychological issues. Excluded youth included those that could not speak, read, or write in English and those with an Axis II disorder. Additionally, youth with Psychotic features, severe Pervasive Developmental Disorders, Intellectual Disability, or a learning disability that would prevent them from understanding the measures were not included. If the results of the anxiety disorder screenings elucidated the presence of anxiety symptoms in the child, and the parent consented to further contact, then the participant information was provided to the intake coordinator team for the Anxiety Study Project at TCSC. Participant demographics for the TCSC group can be found in Table 8.

Source 3: Local Community Group

A total of 158 participants were recruited through public community events throughout Austin, Texas. Community events included local music events, youth theater productions, and youth and family health and fitness events at local athletic centers. Excluded youth included those that could not speak read or write in English and those with an Axis II disorder. Additionally, youth with psychotic features, severe Pervasive Developmental Disorders, Intellectual Disability, or a learning disability that would prevent them from understanding the measures were also excluded. Information consistent with the exclusionary criteria was collected from the parent demographic questionnaire. If the results of the anxiety disorder screenings elucidated the presence of anxiety symptoms in the child, and the parent consented to further contact, then the participant information was provided to the intake coordinator team for the Anxiety Study Project at TCSC. Participant demographic characteristics for the Community Group can be found in Table 8.

INSTRUMENTATION

Demographic Survey

The demographic survey is a self-report intake form adapted and shortened from the intake form utilized at the Texas Child Study Center. The following demographic characteristics were collected from the participants' parents ($N = 280$) (a) gender of parent, (b) parent birthdate, (c) child's gender, (d) child's birthdate, (e) biological child status, (f) child's current grade, (g) child's current school, (h) ethnicity, (i) parent's highest level of education, (j) marital status, (k) child's psychological disorder status, (l) child's psychological disorder, and (m) household income.

Screen for Child Anxiety related Emotional Disorders – Child Version (SCARED-C; Birmaher, Khetarpal, Cully, Brent and McKenzie, 1997)

The SCARED-C is a 41-item child self-report measure that screens for childhood anxiety disorders including GAD, SOP, SAD, and Panic Disorder. Respondents report severity of symptoms for the past three months on a 3-point scale (0=never true, 1=sometimes true, 2= often true). The total score and each of the five factors demonstrated good internal consistency (alpha = .74 to .93), test-retest reliability (intra-class correlation coefficients = .70 to .90), discriminative validity (both between anxiety and other disorders and within anxiety disorders), and moderate parent-child agreement (r = .20 to .47, $p < .001$, all correlations). Child-reported data from the SCARED was utilized to determine clinical symptoms, subclinical anxiety symptoms as well as non-anxious symptoms in study participants. Clinical severity cut-off scores are normed and based on age and gender. Total scores on the child SCARED that are greater than 25 may indicate the presence of an Anxiety Disorder. Specific disorders for those participants with a total score greater than 30 are detailed in Table 9 below.

Table 9: Scoring for SCARED-Child Version.

A score of 7 for items 1, 6, 9, 12, 15, 18, 19, 22, 24, 27, 30, 34, 38 may indicate Panic Disorder or Significant Somatic Symptoms.
A score of 9 for items 5, 7, 14, 21, 23, 28, 33, 35, 37 may indicate Generalized Anxiety Disorder.
A score of 5 for items 4, 8, 13, 16, 20, 25, 29, 31 may indicate Separation Anxiety Disorder.
A score of 8 for items 3, 10, 26, 32, 39, 40, 41 may indicate Social Anxiety Disorder.
A score of 3 for items 2, 11, 17, 36 may indicate Significant School Avoidance.

Young Schema Questionnaire (YSQ-SF; Young & Brown, 2003)

The Young Schema Questionnaire- Short Form is a 75-item questionnaire that addresses 15 core beliefs and maladaptive schemata; emotional deprivation, abandonment, mistrust/abuse, social alienation, defectiveness, incompetence, dependency, vulnerability to harm, enmeshment, subjugation of needs, self-sacrifice, emotional inhibition, unrelenting standards, entitlement, and insufficient self-control. The items are Likert-type from one (completely untrue of me) to six (describes me perfectly). The original 205-item YSQ has good psychometric properties and appears to be a valid measure of core early maladaptive schemata (Lee, Taylor, & Dunn, 1999; Riso et al., 2006; Schmidt, Joiner, Young & Telch, 1995). The internal reliability of the short-form suggests moderate to good internal consistency with Cronbach's alpha coefficients ranging from .76 to .93. (Welburn, Coristine, Dagg, Pontefract, & Jordan, 2002). Thirteen selected items from the YSQ-SF that load onto the following scales were utilized as they have been positively associated with the presence of an anxiety disorder diagnosis in children and adolescents (see Table 10): Abandonment/Instability, Failure to Achieve, Dependence/Incompetence, Unrelenting Standards/Hypercriticalness, Vulnerability to Harm, and Entitlement/Grandiosity (Van Vlierberghe, Braet, Bosmans, Rosseel, Bogels, 2009) (see Appendix F). Scoring charts are available at http://www.schematherapy.com/id111.htm (Young, "Young Schema Questionnaires").

Table 10: YSQ-SF Selected Questions

Abandonment	Q6: I find myself clinging to people I'm close to, because I'm afraid they'll leave me Q7: I need other people so much that I worry about losing them
Failure to Achieve	Q29 I'm not as talented as most people are at their work Q28 Most other people are more capable than I am in areas of work and achievement
Dependence/Incompetence	Q31 I do not feel capable of getting by on my own in everyday life Q32: I think of myself as a dependent person when it comes to everyday functioning Q35: I don't feel confident about my ability to solve everyday problems that come up Q32: I think of myself as a dependent person when it comes to everyday functioning
Unrelenting Standards/Hypercriticalness	Q61: I must be the best at most of what I do; I can't accept second best. Q62: I try to do my best; I can't settle for good enough Q63 I must meet all my responsibilities
Vulnerability to Harm	Q40 I worry that I'm developing a serious illness, even though nothing serious has been diagnosed by a physician Q39 I worry that I'll lose all my money and become destitute
Entitlement/Grandiosity	Q67 I'm special and shouldn't have to accept many of the restrictions placed on other people Q69 I feel that I shouldn't have to follow the normal rules and conventions other people do

PROCEDURE

Phase 1: Initial Measure Development of the Cognitive Vulnerability Schema Questionnaire for Anxious Youth (CVSQ-AY)

Due to the lack of appropriate measures that examine cognitive vulnerability with respect to anxiogenic schemata in anxious youth, the overall item development and construction of the CVSQ-AY was completed prior to utilization in data collection. Item development occurred in a number of stages with the goal of developing a measure that was developed in line with the theory of cognitive vulnerability (1) that there "is an enduring tendency to misinterpret certain types of threatening or novel situations as dangerous" and (2) "a predisposition to perceive one's self as incompetent, weak, or lacking the personal resources to deal with certain types of threatening or stressful situations (Clark & Beck, 2010)." Additional goals in the development of this self-report measure were to (1) collect evaluative feedback from local clinicians and (2) further evaluate and develop the question bank according to natural-language and age appropriateness of questions. The use of unstructured interviews and questionnaires were utilized to complete this evaluative process. Measure development occurred in five stages: Initial Item Development, Developmental Considerations, Preliminary Item Selection, Item Rating, Focus Groups, and Scale Validation.

Stage 1: Initial Item Development

Items for the CVSQ-AY were generated from an extensive review of the literature, initial clinical writing sessions, as well as the feedback and experience of a clinical writing focus group. Initial clinical writing sessions consisted of the principal investigator (PI) as well as Kevin Stark, Ph.D (University of Texas-Austin). Items were generated with regard to specific anxiety schema subgroups established within the cognitive schema literature (see Appendix G). Due to the limited research on child and adolescent anxious cognitive schemata, researchers gathered information from adult

cognitive schema research. While taking into consideration reading level, age appropriateness, and child development, adapted them to the prospective sample demographics. A 3-point Likert scale was used for the CVSQ-AY with scores from Items were scored on a scale from 0 (I never or hardly ever feel like this), 1 (I sometimes feel like this), to 2 (I always or very often feel like this). Total scores on the CVSQ-AY will depend on the total number of items retained. See Appendix G for a total list of the preliminary 143 items.

Stage 2: Developmental Considerations

The final items selected for the CVSQ-AY were administered to youth ranging from 7-17 years old. Therefor, it was important for each item to be evaluated to determine if the reading level, vocabulary, and clarity could be understood by participants. In an effort to ensure that each item was appropriate for the sample population, the master list of 143 items was evaluated in an informal focus group with three developmental psychology doctoral candidates. Each item was evaluated to determine if it was developmentally appropriate based on vocabulary and clarity. Items were then either edited to increase clarity, words were changed to simplify vocabulary, or discarded due to poor quality of the item. For example, items that included words such as "blush", "burgler", "fumble" were either edited or discarded due to the vocabulary level or developmental experience being insufficient for younger children. Overall, 10 items were eliminated due to these considerations, leaving 133 items after stage two.

Stage 3: Preliminary Item Selection

A list of 133 potential items (see Appendix H) was next distributed to a group of nine Ph.D.-level clinicians, pre-doctoral interns, and/or School Psychology doctoral students from The University of Texas – Austin, as well as The Texas Child Study Center. Clinicians were provided with an explanation of the study as well as diagnostic criteria for GAD, SOP, SAD (see Appendices A-C). Clinicians in the preliminary item selection group were asked to read each statement and indicate how well it describes GAD, SOP, and SAD. They then indicated their answer by bubbling in the representative item (GAD, SOP, and SAD). Space was also provided for clinicians to provide item comments/feedback.

Classification of the items was tallied and items with 51% or more of respondents indicating a specific disorder were retained for further analysis. A total of 29 items were retained for further analysis for GAD, 16 for SAD, and 23 for SOP. See Appendix J for a list of the retained 68 items.

Stage 4: Item Rating

Following stage three, the remaining 68 items underwent an additional round of examination and evaluation by three (different) Ph.D.-level clinicians, pre-doctoral interns, and/or School Psychology doctoral students from The University of Texas – Austin, as well as The Texas Child Study Center to determine overall item quality and content validity (see Appendix I). Ratings began with one (weak schema item) to the six (strong schema item). Item ratings were then averaged and those items with the 15 highest rating, per disorder, were retained for the CVSQ-AY. Sixteen items were retained for GAD due to the averaged score (see Appendix J)

Stage 5: Focus Group

Once those 46 items were identified in stage four, the PI held two focus groups based on age: Group 1 consisted of three 7-11 year olds and Group 2 consisted of four 12-17 year olds. Participants were required to have parental consent to participate. Seven total youth were asked to provide feedback on the preliminary 46-item CVSQ-AY. Focus group participants met in a group format and provided verbal feedback on each of the 46 items, as well as the overall measure. Areas of feedback included: ease of understanding directions, visual clarity of the questionnaire, item clarity, and length. Participant feedback was incorporated into the final 46 items and questionnaire design. Scores on the 46-item questionnaire range from 0-92.

Phase 2: Administration of Cognitive Vulnerability Schema Questionnaire for Anxious Youth

The administration phase occurred following the first five stages of phase one. The final number of items determined how many people were needed to take the CVSQ-AY for validation purposes. Tinsley and Tinsley (1987) made recommendations that a minimum range of five to ten respondents per item were needed to conduct a factor analysis. Therefore, this study followed their recommendations for a 46 item measure to include a range of acceptable participants of 230 to 460.

Instrument Administration

Instrument administration included distribution of packets to children and their parent/guardian in the three sampling groups: 1. Anxiety Group; 2. TCSC Group; 3. Community Group. Packets included a cover letter, demographic survey, the 46-item

CVSQ-AY (Winton & Stark), the 41-item SCARED-C (Birmaher, Khetarpal, Cully, Brent and McKenzie, 1997) (see Appendix E), and 14 selected questions from the YSQ-SF (Young & Brown, 2003) (see Appendix F). Participants in the Anxiety Study Project at TCSC Group were interviewed using the ADIS interview schedule to determine anxiety diagnosis (ADIS for DSM-IV:C or P; Silverman & Albano, 2004) and diagnoses from participants in the TCSC Group were obtained through their electronic medical records. The instrument administration occurred after Phase 1 of the development of the CVSQ-AY, between the months of April 2013 and July 2014.

Chapter 4: Results

DEVELOPMENT OF THE COGNITIVE VULNERABILITIES SCHEMA QUESTIONNAIRE FOR ANXIOUS YOUTH (CVSQ-AY)

Factor Analysis & Rational

The means and standard deviations of the specific items on the CVSQ-AY gave an indication of the strength of the participant's anxiogenic schema. Out of the total 280 participants, 271 (96.79%) participants met criteria for participation and completed every item on the CVSQ-AY.

Results of the Principal Axis Factor Analysis

A principal axis factor analysis, or exploratory factor analysis, was conducted using a listwise deletion method on the CVSQ-AY in order to select an interpretable factor solution which best fits the observed correlation matrix between the items. This solution was used to interpret the different factors which address Research Question #1 to describe different anxiogenic schema, identify items that do not load highly on any factor for scale reduction, and establish evidence of reliability as the instrument is shortened in an effort to establish construct validity of the scale. Consistent with Loevinger's (1957) guidelines for substantive and structural validity, the goal of this factor analysis is to create content and a corresponding structure that is consistent with the current literature, is replicable, generalizable, and interpretable.

Tinsley and Tinsley (1987) made recommendations that a minimum range of five to ten respondents per item are needed to conduct a reliable factor analysis with a sound

factor structure. Stevens (1996) cited studies that recommended between 2 and 20 subjects per variable were needed. This study had 5.89 subjects per item variable, which satisfies both Tinsley and Tinsley as well as Steven's recommendations. Table 11 provides descriptive statistics for the 46 items of the CVSQ-AY.

Table 11. Descriptive Statistics for 46 Item CVSQ-AY

Item	Mean	Standard Deviation	N	Item	Mean	Standard Deviation	N
cvsq_1	.55	.647	271	cvsq_24	.49	.688	271
cvsq_2	.88	.823	271	cvsq_25	.85	.803	271
cvsq_3	.46	.642	271	cvsq_26	.56	.732	271
cvsq_4	.78	.769	271	cvsq_27	.71	.749	271
cvsq_5	.92	.736	271	cvsq_28	.66	.762	271
cvsq_6	.80	.813	271	cvsq_29	.41	.632	271
cvsq_7	.77	.824	271	cvsq_30	.56	.732	271
cvsq_8	.86	.786	271	cvsq_31	.70	.841	271
cvsq_9	.78	.756	271	cvsq_32	.83	.767	271
cvsq_10	.49	.730	271	cvsq_33	.59	.988	271
cvsq_11	.54	.687	271	cvsq_34	.70	.726	271
cvsq_12	.55	.708	271	cvsq_35	.20	.499	271
cvsq_13	.84	.809	271	cvsq_36	.25	.574	271
cvsq_14	.33	.602	271	cvsq_37	.29	.590	271
cvsq_15	.32	.611	271	cvsq_38	.38	.639	271
cvsq_16	.94	.770	271	cvsq_39	.34	.610	271
cvsq_17	.47	.607	271	cvsq_40	.33	.596	271
cvsq_18	1.01	.784	271	cvsq_41	.71	.783	271
cvsq_19	.37	.599	271	cvsq_42	.75	.771	271
cvsq_20	.72	.723	271	cvsq_43	.76	.796	271
cvsq_21	.40	.675	271	cvsq_44	.78	.769	271
cvsq_22	.61	.771	271	cvsq_45	.58	.774	271
cvsq_23	.76	.773	271	cvsq_46	.60	.708	271

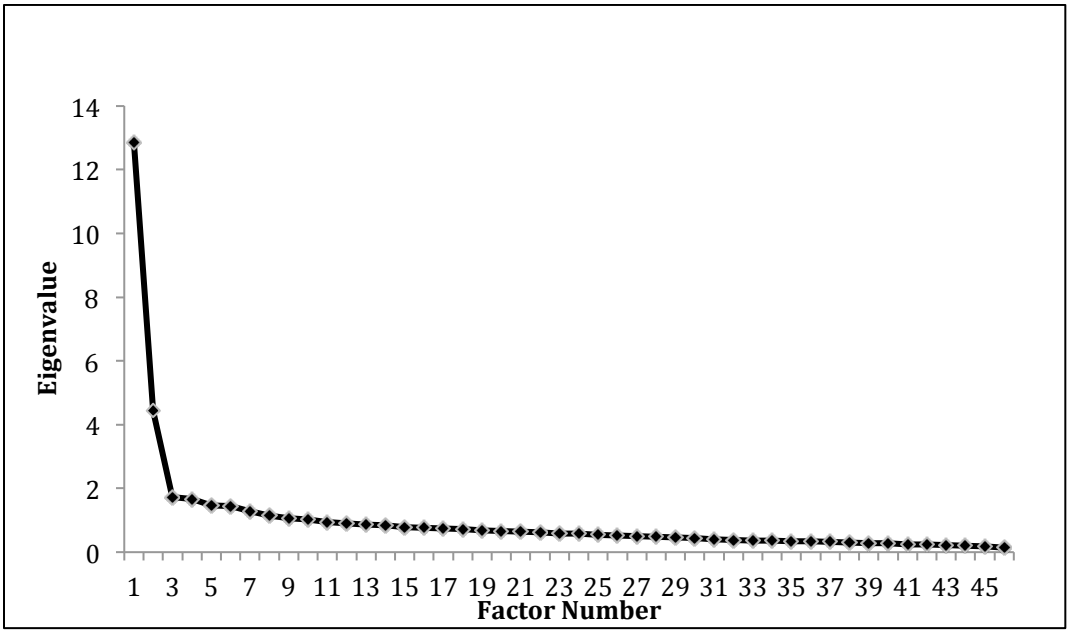
Bartlett's Test of Sphericity was first employed to test if the population correlation matrix between the items was equivalent to the identity matrix (Stevens, 1996). This chi square test was statistically significant ($\chi 2 = 5838.12$, $df = 1035$, $p < .0001$), indicating that linear relationships exist among the items on the CVSQ-AY and that a factor analysis was an appropriate form of data reduction.

The exploratory common factor analysis was conducted using SPSS version 22.0. Principal axis factoring was utilized as the extraction method while using a listwise deletion method on the CVSQ-AY. High correlation scores between two items implies they may have a strong relationship, whereas low correlations between two items indicates a weak relationship. In general, a strong correlation is above 0.7, moderate is between 0.4-0.6, and a weak relationship is below 0.3. A preliminary analysis of the factor matrix in indicates multiple correlations over .40. The highest correlation of $r = 0.78$ for items 39 and 40, so it is expected that these two items load highly on the same factor. Conversely, items 4 and 7 have correlations of $r = 0.40$, indicating a very weak relationship. These two items are expected to load on separate factors.

Factor extraction is a step needed to account for the common variance among items in order to identify an accurate number of latent factors. There are multiple ways to extract and retain factors including scree tests, eigenvalues greater than one, variance cut-offs, and parallel analysis. There is no set guideline for which extraction method yeilds the most accurate number of factors. Therefore, the ultimate decision on how many factors to retain must be supported by evidence (Reise, Waller, & Comrey, 2000).

As noted above, one way to conduct a factor extraction is by using Cattell's scree test (Catell, 1966). A-plot containing the number of factors on the x-axis and corresponding eigenvalues on the y-axis is graphed. The point at which a descending linear trend appears, or the "elbow", provides a visual point of how many factors to retain (Bentler & Yuan, 1998). All factors above the elbow should be retained. Figure 1 provides a scree plot of the eigenvalues of the CVSQ-AY. It shows a distinct elbow or flattening out at the 3rd factor, indicating a clear 2-factor solution.

Figure 1: Scree plot of eigenvalues from CVSQ-AY dataset



The Kaiser-Guttman rule is another indicator used for factor extraction. It states that the number of factors with an eigenvalue greater than one should be extracted. However, there has been substantial criticism regarding this method as it can lead to the retention of too many factors (Zwick & Velicer, 1986). Factors with corresponding total variance explained as well as the eigenvalues for each factor are listed in Table 16 below.

By examining the eigenvalues greater than 1, utilization of the Kaiser-Guttman rule yeilds 10 possible factors that account for approximately 61.01% of the variance. Some investigators believe that total variance explained should be between 40-60% for social sciences and for any individual factor to be meaningful, it should account for at least 5% of the total variance. Factors one and two listed in Table 12 each account for greater than 5% of the variance explained, indicating evidence for a 2-factor solution, however they cumulatively account for only 37.61% of the variance. This may be a function of low sample size or low dimensionality within the instrument.

Table 12: Eigenvalue Analysis

# of Factors	Eigenvalue	% of Variance	Cummulative %	# of Factors	Eigenvalue	% of Variance	Cummulative %
1	**12.387**	**27.949**	**27.949**	24	.587	1.275	83.663
2	**4.444**	**9.662**	**37.611**	25	.547	1.189	84.852
3	1.728	3.756	41.366	26	.515	1.121	85.972
4	1.665	3.619	44.985	27	.498	1.083	87.055
5	1.468	3.191	48.176	28	.474	1.030	88.085
6	1.445	3.142	51.319	29	.456	.992	89.077
7	1.280	2.783	54.102	30	.433	.941	90.018
8	1.143	2.484	56.586	31	.396	.860	90.878
9	1.057	2.297	58.883	32	.380	.827	91.705
10	1.019	2.214	61.097	33	.371	.807	92.511
11	.940	2.042	63.140	34	.364	.792	93.303
12	.914	1.988	65.128	35	.351	.764	94.067
13	.872	1.896	67.024	36	.342	.743	94.809
14	.841	1.828	68.852	37	.314	.682	95.491
15	.780	1.697	70.549	38	.296	.643	96.135
16	.762	1.657	72.205	39	.291	.632	96.767
17	.743	1.616	73.821	40	.274	.597	97.364
18	.730	1.587	75.408	41	.243	.528	97.892
19	.690	1.499	76.907	42	.233	.506	98.399
20	.654	1.422	78.330	43	.225	.488	98.887
21	.641	1.394	79.724	44	.192	.417	99.304
22	.632	1.374	81.099	45	.187	.406	99.710
23	.593	1.289	82.388	46	.133	.290	100.000

Given the matrix discrepencies in these two methods, a third technique is implored to aid in determining the most appropriate number of factors to retain. A parallel analysis, a type of Monte Carlo simulation, can be used to augment findings from a scree test (Drasgow & Lissak, 1983; Horn, 1965; Longman, Cota, Holden, & Fekken, 1989; Montanelli & Humphreys, 1976; Zwick & Velicer, 1986). This technique is considered a superior alternative and utilizes randomized data sets based on the current sample to aid in the expansion of the data matrix. A second scree plot, with eigenvalues from the randomized data is then compared to the eigenvalues from the original scree plot from the real data matrix. The intersection of the original and randomized scree line provides statistical evidence of the maximum number of factors that should be extracted (Reise, Waller, & Comrey, 2000). The "rawpar" parallel analysis extension was utilized in SPSS's syntax editor to conduct this parallel analysis (O'Conner, 2000). The code was written to generate 1000 data matricies for 271 participants and 46 items with a confidence interval of 95%. The eigenvalues from the 1000 data matricies were then averaged to produce estimates for the parallel analysis. Table 13 provides the raw data eigenvalues as well as the randomized data eigenvalues. Factors from the raw data with eigenvalues greater to those generated randomly should be retained as they explain more variance than the corresponding factor in the simulated random data. Therefore, the parallel analysis provides evidence for, at most, an eight-factor solution.

Table 13: Parallel Analysis Eigenvalues

	Raw Data	Random Data
1	12.387	1.079653
2	4.017	0.977358
3	1.287	0.900419
4	1.135	0.836520
5	0.987	0.779409
6	0.943	0.727458
7	0.752	0.678904
8	0.744	0.634353
9	0.571	0.590885
10	0.501	0.548377

Despite utilizing multiple extraction methods the determine an appropriate factor structue, there does not appear to be a consensus from the statistical analyses. Given the current evidence, a factor solution ranging between two and 10 factors could be appropriate for this data set. The original scree plot demonstrated a distinct elbow at the third factor, indicating a two-factor solution. Additionally, the variance explained of factors one and two are both over 5%, whereas the other individual factors contributed less to the total variance. The Kaiser-Guttman rule of eigenvalues less than one indicated that a 10-factor solution would be appropriate, however this method of extraction is highly criticized for over-extracting factor solutions. Lastly, the parallel analysis indicated an appropriate factor solution would be one with 8 or less factors.

Factor Rotation

Factor rotation is utilized in social sciences after the initial factor extraction. The purpose of factor rotation is to make the variables more interpretable and maximize simple structures, or those items with high loadings on a single factor. The simple

structures are more easily interpretable after they are rotated (Reise, Waller, & Comrey, 2000). There are two main types of rotations utilized in an exploratory factor analysis, oblique (Promax or Oblimin) and orthogonal (Varimax). In an orthogonal rotation the factors are not allowed to correlate, however they are in an oblique rotation. In social science, is it generally assumed that psychological variables will correlate (Loo, 1979). As a result, an oblique rotation utilizing Promax was chosen because it was expected that the anxiogenic schemata items of the CVSQ-AY would be correlated with one another, as there is significant overlap in anxiety symptomology.

As indicated in the previous section, results from the factor extraction yielded multiple factor solutions. In an effort to find simple structure, the rotated factor solutions from a 2-factor, 8-factor, and 10-factor solution were examined. Additionally, a 3-factor solution was also examined as cognitive vulnerability theory suggests each anxiety disorder represents a distinct factor structure (Beck, 1985).

The rotated solutions for the 3, 8, and 10-factor solutions fail to shows simple structure. Within the 3, 8, and 10 factor solutions many of the factors were indicated by only one or two items. In general, a minimum of three items per factor are needed for the subscales to be accurately named and demonstrate simple structure (Raubenheimer, 2004). It is important to have multiple items per factor, as this increases the change of being replicated in future studies (Little, Lindenberger & Nesselroade, 1999; Velicer & Fava, 1998).

The rotated 3, 8, and 10-factor solutions were unsuccessful at demonstrating simple structure. As a result, a two-factor solution based on the scree plot and variance greater than 5% was rotated using an oblique rotation. The Pattern Matrix output from SPSS for the 2-factor solution is presented in Table 14. These standardized regression coefficients represent unique contributions to the factor solution. Velicer and Fava (1998) indicated that there was "high" commonality if these coefficients were .8 or greater, however this is less likely to occur in social science data. Low to moderate communalities range from 0.40 to 0.70 and anything lower than 0.40 may indicate that it is related to other items and thus does not represent a unique contribution to a factor. With this in mind, factor loadings greater than .40 were used as a cutoff to identify simple structure.

Table 14: 2-Factor Pattern Matrix for the CVSQ-AY

Item	Factor 1	Factor 2	Item	Factor 1	Factor 2
cvsq_1		0.582	cvsq_24		0.655
cvsq_2	0.486		cvsq_25		
cvsq_3	0.455		cvsq_26		
cvsq_4	0.766		cvsq_27	0.459	
cvsq_5	0.500		cvsq_28	0.504	
cvsq_6			cvsq_29		0.697
cvsq_7		0.643	cvsq_30		
cvsq_8			cvsq_31		
cvsq_9	0.61		cvsq_32		
cvsq_10	0.522		cvsq_33		
cvsq_11	0.452		cvsq_34	0.541	
cvsq_12			cvsq_35		0.418
cvsq_13			cvsq_36		0.750
cvsq_14		0.792	cvsq_37		0.781
cvsq_15		0.75	cvsq_38		0.655
cvsq_16	0.477		cvsq_39		0.504
cvsq_17			cvsq_40		0.581
cvsq_18	0.618		cvsq_41	0.653	
cvsq_19		0.801	cvsq_42	0.764	
cvsq_20	0.482		cvsq_43	0.594	
cvsq_21	0.563		cvsq_44	0.446	
cvsq_22	0.791		cvsq_45	0.773	
cvsq_23	0.574		cvsq_46	0.786	
Sum of Squared Loadings	12.233	3.902			
% of Variance	26.594	8.482			
Cumulative %	26.594	35.076			

As noted earlier, items with loadings of .40 or greater are presented in Table 19. However, multiple items identified in this 2-factor solution are not contributing to

explaining the variance. Upon examination of these items, they appear to be poorly functioning items, which do not clearly load on either of the two-factors. A second factor analysis, with items with correlations greater than .04 as well as those with factor loadings that contribute significantly to the simple structure were retained (see Table 15).

Table 15: Corrected 2-Factor Pattern Matrix with Defined Simple Structure for the CVSQ-AY

Item	Factor 1	Factor 2	Item	Factor 1	Factor 2
cvsq_1		0.571	cvsq_27	0.431	
cvsq_2	0.455		cvsq_28	0.483	
cvsq_4	0.751		cvsq_34	0.554	
cvsq_7		0.608	cvsq_35		0.408
cvsq_9	0.598		cvsq_36		0.735
cvsq_10	0.500		cvsq_37		0.770
cvsq_11	0.419		cvsq_38		0.625
cvsq_14		0.780	cvsq_39		0.498
cvsq_15		0.744	cvsq_40		0.568
cvsq_16	0.456		cvsq_41	0.644	
cvsq_18	0.587		cvsq_42	0.756	
cvsq_19		0.785	cvsq_43	0.587	
cvsq_21	0.572		cvsq_44	0.448	
cvsq_22	0.788		cvsq_45	0.775	
cvsq_24		0.645	cvsq_46	0.795	
Sum of Squared Loadings	8.659	3.503			
% of Variance	28.863	11.678			
Cumulative %	28.863	40.540			

The most interpretable factor solution, which accounted for the greatest amount of common variance as well as greatest simple structure was a 2-factor solution as indicated

by the original scree test. Item reduction was necessary for two reasons: one, to shorten the final version of the CVSQ-AY in an attempt to have a short and robust instrument that would be quick for future participants to take, and two, to account for only those items that contribute highly to the simple structure and have reliability coefficients greater than 0.40. Bartlett's Test of Sphericity was employed in the 2-factor solution, to test if the population correlation matrix between the items was equivalent to the identity matrix (Stevens, 1996). This chi square test was statistically significant ($\chi 2 = 3805.79$, $df = 435$, $p < .0001$), indicating that linear relationships exist among the items on the CVSQ-AY, and that a factor analysis was an appropriate form of data reduction. Deleting items with reliability coefficients that were less than 0.40 resulted in a 30-item instrument. This 2-factor rotated solution that accounts for approximately 40.54% of the variance explained which remains within the 40%-60% guideline.

Table 16: Descriptive Statistics for 30 Item CVSQ-AY

Item	Mean	Standard Deviation	N	Item	Mean	Standard Deviation	N
cvsq_1	0.56	0.651	273	cvsq_27	0.71	0.748	273
cvsq_2	0.88	0.822	273	cvsq_28	0.66	0.761	273
cvsq_4	0.78	0.768	273	cvsq_34	0.70	0.725	273
cvsq_7	0.77	0.822	273	cvsq_35	0.20	0.497	273
cvsq_9	0.78	0.754	273	cvsq_36	0.25	0.574	273
cvsq_10	0.49	0.728	273	cvsq_37	0.30	0.591	273
cvsq_11	0.53	0.686	273	cvsq_38	0.38	0.638	273
cvsq_14	0.33	0.600	273	cvsq_39	0.34	0.609	273
cvsq_15	0.32	0.609	273	cvsq_40	0.33	0.595	273
cvsq_16	0.94	0.770	273	cvsq_41	0.71	0.782	273
cvsq_18	1.00	0.784	273	cvsq_42	0.75	0.768	273
cvsq_19	0.37	0.598	273	cvsq_43	0.77	0.793	273
cvsq_21	0.40	0.674	273	cvsq_44	0.77	0.768	273
cvsq_22	0.61	0.770	273	cvsq_45	0.58	0.773	273
cvsq_24	0.49	0.687	273	cvsq_46	0.60	0.706	273

As described in Table 16 above, based on the 2-factor solution from the factor analysis, each item received a mean score for each of the two factors. Due to the change in item selection, two additional participants were included in the factor analysis as they were no longer excluded based on the inclusion criteria. Each scaled score was then computed by summing the responses for the retained items that had factor loadings greater than 0.40. The scale scores from the two factors were then used to generate estimates of reliability for the CVSY-AY. In general, Cronbach alpha above 0.9 is considered to have excellent internal consistency, between 0.7 and 0.9 is considered to have good internal consistency, between 0.6-0.7 is acceptable, and below 0.6 is poor. The overall Cronbach's alpha for the reduced (30 item) instrument is 0.919 (see Table 17), which is considered excellent.

Table 17: Total Item Statistics for 30-item CVSQ-AY

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
cvsq_1	16.75	128.256	0.371	0.918
cvsq_2	16.44	126.028	0.403	0.918
cvsq_4	16.53	124.389	0.535	0.916
cvsq_7	16.54	127.465	0.323	0.919
cvsq_9	16.53	126.263	0.431	0.917
cvsq_10	16.82	125.755	0.481	0.917
cvsq_11	16.78	126.305	0.478	0.917
cvsq_14	16.99	127.049	0.498	0.916
cvsq_15	17.00	127.369	0.466	0.917
cvsq_16	16.37	125.346	0.476	0.917
cvsq_18	16.31	123.910	0.551	0.916
cvsq_19	16.95	127.234	0.485	0.917
cvsq_21	16.91	125.457	0.545	0.916
cvsq_22	16.70	122.796	0.631	0.914
cvsq_24	16.82	125.295	0.545	0.916
cvsq_27	16.60	125.904	0.458	0.917
cvsq_28	16.65	125.049	0.501	0.916
cvsq_34	16.61	125.561	0.496	0.916
cvsq_35	17.11	128.125	0.512	0.917
cvsq_36	17.06	128.340	0.421	0.917
cvsq_37	17.01	127.303	0.487	0.917
cvsq_38	16.93	126.000	0.54	0.916
cvsq_39	16.97	126.468	0.533	0.916
cvsq_40	16.98	126.674	0.531	0.916
cvsq_41	16.60	122.919	0.612	0.915
cvsq_42	16.56	122.661	0.640	0.914
cvsq_43	16.55	125.615	0.445	0.917
cvsq_44	16.54	124.609	0.522	0.916
cvsq_45	16.73	122.549	0.643	0.914
cvsq_46	16.71	124.306	0.593	0.915

Reliability estimates for the individual factors were then calculated from the 30-item questionnaire. Based on the Cronbach's alpha of factor 1 (0.91) and factor 2 (0.90) (see Table 18), we can conclude that these two factors have excellent internal

consistency. In other words, the items within each factor tend to measure the same construct.

Table 18: Reliability Estimates for the Factor Subscales of the CVSQ-AY

	Sum of Squared Loadings	**% of Variance**	**Cumulative %**	**Cronbach's alpha**
Factor 1: *Generalized Anxiety and Social Phobia Schema* Ex: People are always noticing the things that are wrong with me	12.233	26.594	26.594	0.908
Factor 2: *Separation Anxiety Schema* Ex: I'd start crying and I wouldn't be able to stop if I were separated from my parent for a short amount of time	3.902	8.482	35.076	0.899

Factor One: Generalized Anxiety and Social Phobia Schema

This factor, which had a Cronbach's alpha of 0.91, tapped into both the GAD and SOP schema. These items reflect an overarching fear of negative evaluation, uncertainty about personal safety/abilities, and feelings of inadequacy when it comes to coping with anxiety provoking situations. Table 19 presents each item that loaded on this factor with its associated factor loading, mean item score, standard deviation, scale mean if item

deleted, scale variance if item deleted, corrected item-total correlation, and Cronbach's Alpha if item deleted.

Table 19: Generalized Anxiety Disorder and Social Phobia Schema

Alpha = 0.908; Factor Mean = 0.70	Factor Loading	Mean	Std. Dev.	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach Alpha if Item Deleted
2. It would be really bad if other kids thought I was stupid	0.455	0.88	0.82	11.8	65.42	0.44	0.907
4. When I'm around other people I feel like I look weird or awkward	0.751	0.78	0.77	11.9	63.58	0.64	0.901
9. When in groups, everyone is always judging each other	0.598	0.78	0.75	11.9	65.18	0.52	0.904
10. I can't control doing bad in school	0.500	0.49	0.73	12.18	65.58	0.50	0.905
11. I'm not strong enough to deal with bad things happening	0.419	0.53	0.69	12.14	66.38	0.46	0.906
16. I would feel really bad if other kids didn't like me	0.456	0.94	0.77	11.74	65.37	0.49	0.905
18. I get really worried when I think about things over and over	0.587	1.00	0.78	11.67	64.04	0.59	0.902
21. When I look nervous, people think I'm weird	0.572	0.40	0.67	12.28	65.54	0.55	0.903
22. People are always noticing the things that are wrong with me	0.788	0.61	0.77	12.07	62.76	0.71	0.899
27. I feel I need to prepare for every possible event	0.431	0.71	0.75	11.97	65.87	0.46	0.906
28. If I make the wrong choice I could lose everything I've worked so hard for	0.483	0.66	0.76	12.02	65.21	0.51	0.905
34. When I'm around other people I forget what I'm going to say	0.554	0.70	0.73	11.97	65.35	0.53	0.904
41. I don't want to turn red, sweat, or shake in front of others because they will know how scared, nervous, or anxious I am	0.644	0.71	0.78	11.97	63.46	0.64	0.901
42. I have to look like I know what I'm talking about when I'm around other kids	0.756	0.75	0.77	11.92	62.83	0.71	0.899
43. I think a lot before I talk to other people so I don't say the wrong thing	0.587	0.77	0.79	11.91	64.61	0.53	0.904
44. I'm afraid I won't pass my tests	0.448	0.77	0.77	11.9	65.20	0.50	0.905
45. I must look like I know what I'm talking about or else people will think I'm really stupid	0.775	0.58	0.77	12.1	62.67	0.72	0.899
46. People don't like me	0.795	0.60	0.71	12.08	63.70	0.70	0.900

Items were scored on a scale from 0 (I never or hardly ever feel like this), 1 (I sometimes feel like this), to 2 (I always or very often feel like this)

Those with a Generalized Anxiety and Social Phobia Schema were identified most frequently, as indicated by a mean factor score of 0.70. Specifically, the statements "I would feel really bad if other kids didn't like me" (M = 0.94, SD = .77), "It would be really bad if other kids thought I was stupid" (M = 0.88, SD = .82), "When I'm around other people I feel like I look weird or awkward" (M = 0.78, SD = .77), and "When in groups, everyone is always judging each other", (M = 0.78, SD = .75) were perceived to be the most frequently reported within this factor by the participants in this sample.

Factor Two: Separation Anxiety Schema

Factor two, which had a Cronbach's alpha of 0.90, tapped into the Separation Anxiety schema. These items reflect an overarching fear of abandonment by a parent and a sense of helplessness when coping with separation. Table 20 presents each item that loaded on this factor with its associated factor loading, mean item score, standard deviation, scale mean if item deleted, scale variance if item deleted, corrected item-total correlation, and Cronbach's Alpha if item deleted.

Table 20: Separation Anxiety Schema

Alpha = 0.899; Factor Mean = 0.39	Factor Loading	Mean	Std. Dev.	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1. I won't be able to handle being away from my parent	0.571	0.56	0.65	4.11	23.23	0.52	0.895
7. I'd be really, really scared and not know what to do if I were separated from my parent	0.608	0.77	0.82	3.89	22.19	0.52	0.899
14. I'd start crying and I wouldn't be able to stop if I were separated from my parent for a short amount of time	0.780	0.33	0.60	4.34	22.54	0.71	0.886
15. I won't do well or I'll have a breakdown if I'm not with my parent	0.744	0.32	0.61	4.36	22.71	0.66	0.888
19. I get really scared when I know my parent has to leave	0.785	0.37	0.60	4.31	22.53	0.71	0.886
24. If I'm away from my parent, then something bad may happen to them	0.645	0.49	0.69	4.18	22.18	0.66	0.888
35. I'm afraid my parents are going to forget me	0.408	0.20	0.50	4.48	24.29	0.49	0.896
36. Being away from my parent for a little while would be the worst thing ever	0.735	0.25	0.57	4.42	22.97	0.65	0.889
37. My head would fill up with scary thoughts that wouldn't go away if I were separated from my parent for a little while	0.770	0.30	0.59	4.38	22.64	0.70	0.887
38. If I'm away from my parent, then something bad may happen to me	0.625	0.38	0.64	4.28	22.59	0.64	0.889
39. When I'm not with my parent they could be killed	0.498	0.34	0.61	4.33	23.15	0.57	0.893
40. When I'm not with my parent, then they'll get hurt	0.568	0.33	0.60	4.34	22.97	0.62	0.890

Items were scored on a scale from 0 (I never or hardly ever feel like this), 1 (I sometimes feel like this), to 2 (I always or very often feel like this)

The mean score for this factor was 0.39, which indicates that having a Separation Anxiety Schema is the least frequently reported anxiogenic schema reported by this sample. Specifically, the statements "I'd be really, really scared and not know what to do

if I were separated from my parent" (M = 0.77, SD = .82), and "I won't be able to handle being away from my parent" (M = 0.56, SD = .65) were perceived to be the most frequently reported within this factor by the participants in this sample, while "I'm afraid my parents are going to forget me" (M = 0.20, SD = .50), and "Being away from my parent for a little while would be the worst thing ever", (M = 0.25, SD = .57) were the least frequently reported.

Deleted Items

Sixteen items were deleted from the original 46 items that were presented in the instrument administration sample. These 16 items did not have factor loadings higher than 0.40 on either of the two factors, however they were examined to see if items were endorsed more or less than typical. The means and standard deviations are presented in Table 21 below.

Table 21: *Deleted CVSQ-AY Items*

	Mean	Std. Deviation
3. When I get older, I feel like I won't get a good job	0.46	0.64
5. I can't control if bad things happen	0.92	0.74
6. I don't want others to see me shake when I'm nervous or anxious	0.80	0.81
8. If one of my parents got hurt I wouldn't know what to do	0.86	0.79
12. I'm going to get hurt in a bad accident	0.55	0.71
13. I need to get ready for when bad things happen	0.84	0.81
17. I make the wrong choices without my parents around	0.47	0.61
20. When I'm anxious, nervous, or worried I don't know what to do	0.72	0.72
23. What other people think about me is really important	0.76	0.77
25. I can't control dangerous people	0.85	0.80
26. If I don't do well on every homework then I won't be able to go to the next grade	0.56	0.73
29. I'm afraid I'm going to get separated from my parents	0.41	0.63
30. Thinking a lot about bad things helps me prepare for them	0.56	0.73
31. It would be horrible if other kids thought I was a baby	0.70	0.84
32. I get really scared or worried when I get a bad grade	0.83	0.77
33. If I don't pass my text I may not be able to graduate high school	0.59	0.99

Items were scored on a scale from 0 (I never or hardly ever feel like this), 1 (I sometimes feel like this), to 2 (I always or very often feel like this)

The statements "I'm afraid I'm going to get separated from my parents" (M = 0.41, SD = .63) and "When I get older, I feel like I won't get a good job" (M = 0.46, SD = .64) were the least frequently reported statements within the deleted items. The statements "I can't control if bad things happen" (M = 0.92, SD = .74), and "If one of my parents got hurt I wouldn't know what to do" (M = 0.86, SD = .79) were the most frequently reported statements within the deleted items.

SUMMARY

The Generalized Anxiety Disorder and Social Phobia Schema ($M = 0.70$) and the Separation Anxiety Schema ($M = 0.39$) were the two factors identified from the factor analysis. Table 22 summarizes the specific statements that were reported most and least frequently.

Table 22: Summary of Most and Least Frequently Endorsed Statements on CVSY-AY

Most Frequently *Endorsed Statements*	Mean	Least Frequently *Endorsed Statements*	Mean
I get really worried when I think about things over and over (Factor 1)	1.00	I'm afraid my parents are going to forget me (Factor 2)	0.20
I would feel really bad if other kids didn't like me (Factor 1)	0.94	Being away from my parent for a little while would be the worst thing ever (Factor 2)	0.25
I can't control if bad things happen (Deleted Item)	0.92	My head would fill up with scary thoughts that wouldn't go away if I were separated from my parent for a little while (Factor 2)	0.30
It would be really bad if other kids thought I was stupid (Factor 1)	0.88	I won't do well or I'll have a breakdown if I'm not with my parent (Factor 2)	0.32
If one of my parents got hurt I wouldn't know what to do (Deleted Item)	0.86	When I'm not with my parent, then they'll get hurt (Factor 2)	0.33
I can't control dangerous people (Deleted Item)	0.85	I'd start crying and I wouldn't be able to stop if I were separated from my parent for a short amount of time (Factor 2)	0.33

Items were scored on a scale from 0 (I never or hardly ever feel like this), 1 (I sometimes feel like this), to 2 (I always or very often feel like this)

The factor intercorrelation matrix shows the correlation of each of the two factors with each other. Table 23 presents this data and results of the correlation matrix indicates that the correlation $r = 0.40$ is considered to be a moderate correlation with one another. No additional higher order analyses were conducted on this rotated 2-factor analysis. The resulting 30-item questionnaire will be utilized in subsequent chapters to further evaluate the construct validity including convergent validity as well as examine descriptive statistics of the sample.

Table 23: Factor Intercorrelation Matrix, 2-Factor Solution

Factor	1	2
1	1.000	0.395
2	0.395	1.000

SUPPLEMENTAL ANALYSES

Relationship Between CVSQ-AY, SCARED, and Young Schema Questionnaire

The purpose of this section is to present the results of the relationship between the CVSQ-AY, the SCARED, and the Young Schema measures and answer the two research questions initially proposed in this dissertation study. Additional demographic variables will be examined within the analyses.

Participant Characteristics

The demographic variables of age, gender, ethnicity, and family income were evaluated to determine if any significant differences occurred between the three experimental groups. ANOVAS were performed to determine if the experimental groups differed on the demographic variables of age, gender, and family income and a chi-square

test was performed to determine if the groups differed on ethnicity. Table 24 presents the results of the analyses performed on the demographic variables of age, gender, and family income. There was a significant group effect for age at the $p < .05$ level for the three groups [$F(2, 278) = 5.04$, $p = 0.01$]. Post hoc comparisons using the Tukey HSD test indicated that the mean age score for the TCSC group ($M = 12.72$, $SD = 2.99$) was significantly different than the Anxiety Group ($M = 10.91$, $SD = 2.43$). However, the Community Group ($M = 11.80$, $SD = 2.86$) did not significantly differ from the Anxiety or TCSC Groups. Taken together, it appears that the participants in the Anxiety Group were slightly younger than those in the TCSC Group. Further analyses of age indicated no significant differences between those participants younger than 11 years old and those older than 11 years old on the CVSQ-AY, $F(1, 278) = 2.02$, $p = 0.17$.

Table 24: Analysis of Variance for Age, Gender, & Family Income

Dependent Measure	*Anxiety Group* (n=23)	*TCSC Group* (n=99)	*Community Group* (n=158)	F	p
Age	10.91 (2.43)	12.72 (2.99)	11.80 (2.86)	5.04	0.01*
Gender	1.39 (0.50)	1.46 (0.50)	1.46 (0.50)	0.22	0.80
Family Income	3.35 (1.87)	3.17 (1.60)	3.12 (1.75)	0.19	0.83

Note. Value enclosed in parentheses represents standard deviation.
* Significant group difference $p < .05$

Of the 263 participants that reported ethnicity, significant differences were found between groups. A chi-square test was performed and a significant relationship was found between group and ethnicity, $X^2(2, N = 263) = 18.89$, $p = 0.04$. Participants in the

Anxiety Group were significantly more homogeneous, consisting of a majority (85.7%) of Caucasian participants, while participants in the TCSC and Community Groups were slightly more diverse with 66.0% and 60.7% Caucasian.

Table 25 provides a breakdown of group differences on each of the subscales and total scores from the Young Schema Questionnaire, SCARED-C, and CVSQ-AY.

Table 25: Group Differences on Measures of Participant Characteristics

	Anxiety Group (n=23)	*TCSC Group* (n=99)	*Community Group* (n=158)	F	p
YOUNG Abandonment	4.13 (3.11)	5.81 (3.21)	4.61 (2.60)	6.393	0.00*
YOUNG Failure to Achieve	3.96 (3.56)	6.13 (3.17)	5.22 (2.80)	5.84	0.00*
YOUNG Dependence/ Incompetence	6.13 (4.72)	8.00 (3.40)	6.90 (3.35)	4.26	0.02*
YOUNG Unrelenting Standards	7.39 (5.77)	11.15 (4.19)	10.98 (4.14)	7.61	0.00*
YOUNG Vulnerability To Harm	2.35 (2.19)	4.26 (2.74)	3.61 (2.39)	5.91	0.00*
YOUNG Entitlement Grandiosity	2.70 (2.30)	4.71 (3.05)	4.51 (2.75)	4.86	0.00*
YOUNG Total	28.57 (18.60)	40.06 (12.66)	36.06 (11.38)	8.56	0.00*
SCARED GAD	9.73 (5.18)	8.30 (5.50)	6.03 (4.35)	10.13	0.00*
SCARED SOP	6.27 (4.18)	6.81 (4.21)	5.87 (3.91)	1.63	0.20
SCARED SAD	5.73 (4.01)	4.83 (3.80)	4.68 (3.56)	0.79	0.46
SCARED Total	30.23 (13.88)	30.79 (18.78)	22.90 (14.30)	8.13	0.00*

Table 25: Group Differences on Measures of Participant Characteristics Continued

	Anxiety Group (n=23)	*TCSC Group* (n=99)	*Community Group* (n=158)	F	p
CVSQ-AY General & Social Anxiety	8.35 (7.83)	15.54 (9.46)	11.22 (7.44)	11.57	0.00*
CVSQ-AY Separation Anxiety	4.61 (5.81)	4.60 (5.40)	4.61 (4.97)	0.00	1.00
CVSQ-AY Total	12.96 (10.56)	20.14 (12.78)	15.83 (10.77)	5.90	0.00*

Note. Value enclosed in parentheses represents standard deviation. GAD=Generalized Anxiety Disorder, SOP = Social Phobia, SAD = Separation Anxiety Disorder
* Significant group difference $p < .05$

Construct Validity

Prior to answering research questions 1 and 2, a correlation analysis was conducted to determine the convergent validity between the CVSQ-AY and the Young Schema questionnaire. As discussed in previous sections, the Young Schema Questionnaire was selected as it demonstrated high correlation with anxiogenic schemata in adults (Van Vlierberghe, Braet, Bosmans, Rosseel, & Bogels, 2009). Due to the dearth of child anxiety schema measures, the Young Schema Questionnaire was included in data collection in an effort to provide convergent validity with the finalized CVSQ-AY. The correlation provides evidence for a moderate positive correlation was found between the

CVSQ-AY and the Young Schema Questionnaire $r(280) = 0.62, p < .01$. It can therefore be concluded that the CVSQ-AY is a valid measure for anxiogenic schemata and can be utilized in subsequent analyses.

Research Question 1:

Does having an anxious cognitive schema predict higher anxiety?

The following analysis utilized SPSS-22 to examine the correlation between the SCARED-C and the CVSQ-AY. It was hypothesized that as participants who reported having higher anxiogenic schemata would also report higher anxiety symptomology. As described in Table 26, the SCARED total and the CVSQ-AY General/Social Schema have a strong positive correlation of $r(280) = 0.74, p < .01$. The SCARED total and the CVSQ-AY Separation Schema have a moderate positive correlation of $r(280) = 0.49, p < .01$. Finally the SCARED total and the CVSQ-AY total indicate a strong positive correlation of $r(280) = 0.76, p < .01$.

Table 26: Correlation of SCARED-Total with CVSQ-AY Subscores and Total

	Participants (n=280)		
	CVSQ-AY General/Social Schema	CVSQ-AY Separation Schema	CVSQ-AY Total
SCARED Total	0.74**	0.49**	0.76**

Note: Values are Pearson Moment Correlations. ** indicates significance at the 0.01 level (2-tailed)

A simple linear regression was carried out to ascertain the extent to which anxious cognitive schema, as measured by the CVSQ-AY, could predict the presence of anxiety as measured by the SCARED-C. A strong positive correlation was found between the CVSQ-AY and the SCARED-C (r = .76) and the regression model predicted 57% of the variance. The model was a good fit for the data $r(280) = 0.76$, $p < .01$ (see Table 27). Twenty-five points represents where the SCARED-C indicates the presence of a possible anxiety disorder with more specific diagnoses above 30 (SCARED; Birmaher, Khetarpal, Cully, Brent and McKenzie, 1997). Therefore it can be concluded that the intersection of these points may indicate a cutoff score of 19 for the CVSQ-AY that represents an anxiogenic schema severe enough to warrant a possible diagnosis of an anxiety disorder.

Table 27: Regression Analysis of CVSQ-AY Total with SCARED-C Total

	Participants (n=280) B	SE B	β
Constant	8.12	1.14	
CVSQ-AY Total	1.06	0.06	0.76**

Research Question 2

Do participants with anxiety disorders report significantly higher scores than non-anxious youth on the two factors of the CVSQ-AY?

It was hypothesized that participants with an anxiety disorder will report significantly higher scores on the CVSQ-AY for factors 1 and 2.

The diagnostic scales used to determine the presence of an anxiety disorder differed for each participant group. Participants in the Anxiety Study group underwent a lengthy diagnostic process including the Anxiety Disorders Interview Schedule (ADIS), questionnaires, and interviews. A team of graduate students and clinicians ultimately determined the presence and diagnosis of an anxiety disorder. Diagnosis from the TCSC sample was collected from the participant's electronic medical record. Their psychologist, psychiatrist, or graduate level therapist provided participant diagnosis. Lastly, parents of participants in the community self-reported their child's psychological diagnosis. It was noted on the demographic questionnaire that a mental health clinician, including their psychologist or psychiatrist, determined their child's diagnosis.

The following analysis utilized SPSS-22 to examine the relationship between the participant diagnosis and the CVSQ-AY factors. An independent samples t-test was conducted to compare CVSQ-AY Factor 1 (General & Social Phobia Schema) in participants with and without an anxiety diagnosis. Additionally, a second independent samples t-test was conducted to compare CVSQ-AY Factor 2 (Separation Anxiety Schema) in participants with and without an anxiety diagnosis.

In order to determine if a participant's CVSA-AY score for Factor 1 differs depending on their anxiety diagnosis status an Independent t-test was conducted with a set alpha level of .05. The mean CVSQ-AY score for Factor 1 for participants with an anxiety diagnosis was 14.46 (SD = 10.08), while the mean CVSQ-AY score for Factor 1

for participants without an anxiety diagnosis was 12.02 (*SD* = 8.07). The data indicate that the mean CVSQ-AY score for Factor 1 was significantly different between participants with an anxiety diagnosis and those without, $t(278) = 1.91$, $p = 0.03$

In order to determine if a participant's CVSA-AY score for Factor 2 differs depending on their anxiety diagnosis status an Independent t-test was conducted with a set alpha level of .05. The mean CVSQ-AY score for Factor 2 for participants with an anxiety diagnosis was 4.20 (*SD* = 5.10), while the mean CVSQ-AY score for Factor 2 for participants without an anxiety diagnosis was 4.20 (*SD* = 5.53). The data indicate that the mean CVSQ-AY score for Factor 2 was significantly different between participants with an anxiety diagnosis and those without, $t(278) = 0.66$, $p = 0.53$. Additional *t*-tests were conducted to determine CVSQ-AY trends in those 11 patients diagnosed with SAD. Results indicate no significant differences on CVSQ-AY scores for Factor 1 or 2 for those 11 participants, however CVSQ-AY scores are trending higher for those with a diagnosis of SAD on both factors.

Based on the t-test analyses, the scores on the Factor 1 of the CVSQ-AY appear to be significantly different depending on anxiety disorder status. Therefore we reject the null hypothesis and conclude that Factor 1 on the CVSQ-AY may be able to differentiate those with and without an anxiety disorder. However, the scores on the Factor 2 of the CVSQ-AY are not significantly different depending on anxiety disorder status. Therefore we fail to reject the null hypothesis and conclude that Factor 2 on the CVSQ-AY may not be able to differentiate those with and without an anxiety disorder.

Chapter 5: Discussion

This study investigated the development and application of a questionnaire designed to measure anxiogenic schema in youth. The purpose was to expand current research on anxiety and cognitive vulnerability to provide a better understanding of how a youth's worldview, or schemata, may impact their susceptibility to developing an anxiety disorder. By developing an anxiogenic schema questionnaire for children and adolescence, the field of cognitive vulnerability research could be expanded and utilized for both preventative and therapeutic interventions.

SUMMARY OF RESULTS

The initial goal of this dissertation was to create an instrument to measure anxiogenic schema, prior to analyzing data. Following an extensive development phase, that sought to establish a 3-factor structure for each of the anxiety disorders being examined (GAD, SOP, SAD), the data was evaluated through a factor analysis. Following the factor analysis, there was two supplemental analyses questions: (1) Does having an anxious cognitive schema predict higher anxiety, and (2) If cognitive schema factors are identified, do they predict the presence of a particular anxiety disorder?

Results of the factor analysis provided a 2-factor solution, with the first factor encompassing anxiogenic schema of both, GAD and SOP, and the second factor encompassing anxiogenic schema of SAD. This was contrary to previous anxiogenic schema theory that suggested that each anxiety disorder has a unique cognitive schema-structure that reinforces anxious vulnerability (Beck, 1985; Riskind, 1997). A two-factor

structure suggested a larger overlap in cognitive schema structure between GAD and SOP than was previously hypothesized.

Additional analyses revealed that not only was the instrument a valid measure of anxiogenic schema, it was also highly related with anxiety symptomology. This seemed to suggest that as a youth's cognitions and views of their world become more anxious, their symptoms and behaviors related to anxiety increased as well. No significant differences were found when examining each of the factors and their ability to predict anxiety diagnosis. As a result, the instrument was not able to differentiate those with an anxiety disorder and those without based on their cognitive schema profile. Findings emerging from the study's results are discussed below.

OVERVIEW OF KEY FINDINGS

This study's findings reinforce Beck's (1985) theory that anxiogenic schema play an important role in the development and maintenance of anxiety. Furthermore, individuals vulnerable to anxiety can be distinguished from nonvulnerable persons by their maladaptive cognitive schemas. Beck's theory of cognitive vulnerability supports the results for Separation Anxiety disorder. The second factor identified in the CVSQ-AY represents a distinct and independent anxiogenic schemata for Separation Anxiety. This suggested that the worldview or belief system that participants had with regard to separation anxiety appeared to be distinct and represented its own unique contribution to the anxiogenic schemata.

The first factor identified within the factor analysis represented an overlap of both GAD and SOP schema. This significant overlap between GAD and SOP schemata implied a larger degree of anxiogenic schema overlap within these two disorders than previously expected. The DSM-IV-TR indicates that anxiety symptomology, based partly on behavioral indicators, overlaps from disorder to disorder. For example, the core belief of vulnerability to harm and inadequate coping is the foundation of anxiogenic schemata and can be seen throughout general, social, and separation anxiety disorders. Similarly, increased heart rate and avoidance behaviors are also typical behaviors exhibited within the three anxiety disorders investigated within this study. However, this finding suggested that the anxiogenic schema for GAD and SOP may be more related than previously hypothesized, indicating that the worldview or belief system that participants have with regard to GAD and SOP may not represent unique contributions.

RESEARCH QUESTIONS 1 & 2

Does Having an Anxious Cognitive Schema Predict Higher Anxiety?

One of the main contributions of this research was the identification of anxiogenic schemata and its implication for identifying anxiety symptomology. Participants in the study reported both anxiogenic schemata as measured by the CVSQ-AY as well as anxiety symptomology as measured by the SCARED-C. Results implied that those participants with high anxiogenic schema also reported higher anxiety symptoms as measured by the SCARED-C. This is an important finding as it supports previous theories (Clark & Beck, 2011) that those with an anxious worldview are more susceptible

to developing an anxiety disorder (Beidel et al., 1985; Bogels & Zigterman, 2000). Additionally, it implies that those with an anxiogenic schema are quantitatively different from those without in that they demonstrate a different and higher level symptomology as well as threat vulnerability.

Do participants with anxiety disorders report significantly higher scores than non-anxious youth on the two factors of the CVSQ-AY?

It was hypothesized that participants with an anxiety disorder will report significantly higher scores on the CVSQ-AY for factors 1 and 2.

Based on the t-test analyses, the scores on the Factor 1 of the CVSQ-AY appeared to be significantly different depending on anxiety disorder status. Therefore we reject the null hypothesis and conclude that Factor 1 on the CVSQ-AY may be able to differentiate those with and without an anxiety disorder. However, the scores on the Factor 2 of the CVSQ-AY are not significantly different depending on anxiety disorder status. Therefore we fail to reject the null hypothesis and conclude that Factor 2 on the CVSQ-AY may not be able to differentiate those with and without an anxiety disorder.

INTEGRATION OF FINDINGS WITH PREVIOUS RESEARCH

The current study built upon previous literature and sought to develop and identify anxiogenic schemata within 7-17 year old youth. Based upon previous literature (Clark & Beck, 2010), the CVSQ-AY was developed to identify distinct anxiogenic structures for three anxiety disorders: Generalized, Social, and Separation Anxiety. Within each of these three disorders was hypothesized to be an underlying theme of

vulnerability to harm and inadequate coping (Beck, 1985). The instrument was specifically designed to identify those youth with a distinct cognitive vulnerability to developing an anxiety disorder. As previous research indicates, anxiety disorders are one of the most costly mental disorders and also tend to develop in childhood and adolescence (Dupont et al., 1996; Greenburg et al, 1999; Kessler Chiu, Demler, & Walters, 2005). Furthermore, as children with anxiety become older their risk for developing comorbid disorders such as depression also increases (Newman et al., 1996). Therefore identifying factors that increase vulnerability earlier may facilitate faster and more focused treatment.

In particular, the current study's findings support previous theories and research on anxiogenic schema (Beck, 1985, Beck & Clark 2010, Bogels & Zigterman, 2000) in that those with higher anxious schemata tend to have higher rates of anxiety symptoms. It appears that youth with a belief that they have a vulnerability to harm and inadequate coping also tend to be associated with a more anxious cognitive schema. However, as described within the literature review, relatively few studies have specifically examined anxiogenic schemata in children and adolescents.

With regard to GAD schema research, the current study presented mixed results. The instrument was not able to differentiate GAD schema from SOP within a distinct factor, which is inconsistent with Beck's model (1985) or the limited research available on GAD (Dugas et al., 1997, Dugas, Gagnon, et al., 1998). As a result, both GAD and SOP are represented within one factor, with overlapping anxiogenic schemata. Similarly,

previous research on SOP indicated specific and distinct maladaptive cognitive schemata including the core belief of helplessness, beliefs about others and disapproval, and beliefs about social performance standards and anxiety effects (Beck & Clark, 2010; Becker et al., 2001; Beidel et al., 1985; Turner & Beidel, 1985; Turner et al., 1986), yet this was not supported by the current factor solution. However, as indicated by the results of research question #2, the CVSQ-AY was highly correlated with specific anxiety symptomology. In particular, the GAD/SOP factor of the CVSQ-AY correlated highly with the GAD and SOP subscales of the SCARED-C. As a result, although only two factors were identified on the CVSQ-AY, the correlation between schema factors and symptomology were consistent with Beck's cognitive vulnerability theory (1985).

Additionally, when reviewing schema content across disorders, there may be an overlap, just as there is with symptomology. For example, one may have an irrational fear of giving a speech in class in that they believe the class will publically ridicule them and they will fail their grade. This example encompasses both the 'general threat' and 'personal vulnerability' within the GAD schema as well as the 'beliefs about disapproval' and 'beliefs about social performance standards' of the SOP schema (Beck & Clark, 2010). Therefore, it seems appropriate for a participant to score highly on both a GAD and SOP schema. Separation Anxiety may be more distinct as the current results appeared to be consistent with Becks (1985) model of cognitive vulnerability in that the schema pattern represented a unique contribution to the anxious schema. However, as described previously, research examining Separation Anxiety schemata in children and adolescents is sparse. Results of the current study indicated that this separate factor was

highly correlated with anxiety symptomology which was consistent with Bogels & Zigterman's study (2000), however was not able to differentiate those with a diagnosis of Separation Anxiety and those without.

GENERAL LIMITATIONS

There were several limitations to consider when evaluating the data for the current study. One of the most obvious limitations is the overall sample size both within groups as well as a whole. Tinsley and Tinsley (1987) recommended 5-10 participants per item and Stevens (1996) indicated that a minimum range of 2-20 participants was needed to successfully complete a factor analysis. Although the current study produced 5.89 participants for each item and satisfied this recommendation, this may have impacted the ability to form a solid factor structure. Therefore, the factor structure may be less likely to identify differences with a smaller sample size.

The number of participants with diagnosed anxiety disorders may have also impacted the ability to see differences between groups. Overall, only 52 participants were diagnosed with GAD, SOP, and/or SAD. Many of these participants had comorbid anxiety disorders, so the number of participants with a single anxiety disorder was quite low. This small sample size limited the power behind each analysis, making it more difficult to determine whether or not the lack of significant results was an accurate finding or a result of having insufficient power to detect meaningful differences. As a result, the limited sample size utilized within the question #2 analyses should be interpreted with caution.

Utilizing self-reported anxiety symptoms and diagnoses within the groups may have also influenced the results. For example, in the Community sample, the participants' parents were asked to provide their child's diagnosis only if it had been diagnosed by a physician or mental health clinician. However, many parents approached the researchers indicating concern for clinical levels of anxiety within their child, but no diagnosis. Parents knew and understood their child was suffering with anxiety symptoms, however had not yet taken them to be evaluated. As a result, when examining question #2, participants with undiagnosed anxiety disorders may have skewed the sample, as their responses may have reflected higher anxiogenic schemata, however they were categorized into a non-anxious group. This provided more support for evaluating each subscale of the CVSQ-AY with regard to the SCARED-C, as the SCARED-C placed participants into categories based on their self-reported anxiety symptomology.

The item reduction method may have also impacted the quality of items retained or discarded. It may be possible that during the early stages of item reduction, clinicians or researchers may have negatively evaluated some items that may have contributed highly to the factor structure.

These limitations raised questions about the accuracy of the results of this study. The results, both significant and non-significant, may be reflected accurately; however the restricted sample size as a whole and within subgroups as well as item reduction, and the manner in which anxiety diagnosis was collected may have affected the analyses' ability to discover accurate and significant results.

IMPLICATIONS

Despite the noted limitations, the findings from this study are significant and contribute useful information to the field of anxiogenic schema and cognitive vulnerability of anxiety in children and adolescents.

Theoretical Implications

The current study adds to the existing research on the development of anxiety disorders in youth. Developing a measure to examine Beck's cognitive vulnerability model of anxiety had never been evaluated within youth and adolescents prior to this study. The current study's findings suggest that having an anxiogenic schema is highly related to anxiety symptomology. In particular, the findings highlight the role of cognitive vulnerability and anxiogenic schemata in the development and maintenance of anxiety disorders. Furthermore, although the instrument was not able to identify those participants with diagnosed anxiety disorders, it is able to effectively identify those youth with clinically significant symptomology, which offers a platform for clinicians to conduct further evaluation. The findings from the current study suggested that having a anxiogenic cognitive style impacts ones vulnerability to developing or having an anxiety disorder.

Preventative Interventions and Clinical Practice

Future studies investigating cognitive risk factors of anxiety disorders should also examine anxiogenic schema development. It is important to note that not all participants

with high anxiogenic schema had a diagnosed anxiety disorder, however those with higher scores were at greater risk for reporting anxiety symptomology. This study suggests that schema research with children and adolescents may be a way to identify those at risk earlier, and thus develop a treatment based on reducing a child's cognitive vulnerability. Schema theorists would postulate that schema does not become engrained and intact until adulthood, and that having a maladaptive cognitive schema may be somewhat flexible and responsive to therapeutic interventions in childhood or adolescence (Stallard & Rayner, 2005). Therefor, targeting these beliefs early on would provide a foundation for preventative treatment.

Future Research

Future research should attempt to further understand the role cognitions play in the development of maladaptive schema and cognitive vulnerability. Anxiety disorders are extremely prevalent and costly from both a diagnostic and economic perspective. As the field of psychology explores the variables that lead to symptomology and eventually a diagnosis research identifying vulnerability factors could be utilized for preventative therapies.

This study could be extended in a number of ways to provide a deeper understanding of the link between anxiogenic schemata and vulnerability to anxiety disorders. Researchers could further explore differences within each disorder by collecting a larger sample of participants diagnosed with anxiety disorders and those at-risk for developing an anxiety disorder. By examining a larger sample of those affected

by anxiety, researchers may be able to provide additional clarification about the role of anxiogenic schemata in the expression of anxiety disorders. Furthermore, given the relatively low correlations within the current sample for the CVSQ-AY and diagnosis, a larger targeted sample may be able to demonstrate schematic differences across disorders in a more distinct way.

This study also magnifies the need for good measurement of anxiogenic schema within a youth population. It is clear from the previous research and methods of measurement that focus on one or two aspects of cognitive vulnerability of a particular disorder (Bogels & Zigterman, 2000; Van Vlierberghe, Braet, Bosmans, Rosseel, & Bogels, 2009) that there is not a single and meaningful scale to measure this construct effectively. By focusing research on measurement development and the areas of vulnerability, those in the mental health field may be better equipped to develop programs to target such maladaptive views.

Another direction for this study is a more stringent examination of the higher order factor analysis. It would be interesting to see how the two factors predict additional outcomes such as age of onset, severity of anxiety diagnosis, or how stable an anxiogenic schema is in childhood and adolescence.

CONCLUSIONS

The results of this study indicate that those youth with a more maladaptive anxiogenic schema are more likely to also have higher anxiety symptomology. Additionally, although having a higher anxiogenic schema profile is not diagnostically

predictive of a particular anxiety disorder, it is correlated with having anxiety symptoms for that particular disorder. This supports other emerging research that anxiogenic schemata related to personal threat and vulnerability may be predisposing factors to anxiety (Clark & Beck, 2011). The results of this study highlight the need for further research into anxiogenic schema and cognitive vulnerability in children and adolescents, as well as better methods for measuring anxiogenic schema as a whole. This study provides support for a long-standing theory and systematically identifies areas where mental health clinicians could utilize preventative interventions targeted at those maladaptive schema.

Appendix A

DSM-IV TR Diagnostic Criteria for Generalized Anxiety Disorder

Generalized Anxiety Disorder
A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).
B. The person finds it difficult to control the worry.
C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms present for more days than not for the past 6 months). Note: Only one item is required in children.
(1) restlessness or feeling keyed up or on edge (2) being easily fatigued (3) difficulty concentrating or mind going blank (4) irritability (5) muscle tension (6) sleep disturbance (difficulty falling or staying asleep, or restless unsatisfying sleep)
D. The focus of the anxiety and worry is not confined to features of an Axis I disorder, e.g., the anxiety or worry is not about having a Panic Attack (as in Panic Disorder), being embarrassed in public (as in Social Phobia), being contaminated (as in Obsessive-Compulsive Disorder), being away from home or close relatives (as in Separation Anxiety Disorder), gaining weight (as in Anorexia Nervosa), having multiple physical complaints (as in Somatization Disorder), or having a serious illness (as in Hypochondriasis), and the anxiety and worry do not occur exclusively during Posttraumatic Stress Disorder.
E. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
F. The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hyperthyroidism) and does not occur exclusively during a Mood Disorder, a Psychotic Disorder, or a Pervasive Developmental Disorder.

Appendix B

DSM-IV TR Diagnostic Criteria for Social Phobia

Social Phobia
A. A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. The individual fears that he or she will act in a way (or show anxiety symptoms) that will be humiliating or embarrassing. Note: In children, there must be evidence of the capacity for age-appropriate social relationships with familiar people and the anxiety must occur in peer settings, not just in interactions with adults.
B. Exposure to the feared social situation almost invariably provokes anxiety, which may take the form of a situationally bound or situationally predisposed Panic Attack. Note: In children, the anxiety may be expressed by crying, tantrums, freezing, or shrinking from social situations with unfamiliar people.
C. The person recognizes that the fear is excessive or unreasonable. Note: In children, this feature may be absent.
D. The feared social or performance situations are avoided or else are endured with intense anxiety or distress
E. The avoidance, anxious anticipation, or distress in the feared social or performance situation(s) interferes significantly with the person's normal routine, occupational (academic) functioning, or social activities or relationships, or there is marked distress about having the phobia.
F. In individuals under age 18 years, the duration is at least 6 months.
G. The fear or avoidance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition and is not better accounted for by another mental disorder (e.g., Panic Disorder With or Without Agoraphobia, Separation Anxiety Disorder, Body Dysmorphic Disorder, a Pervasive Developmental Disorder, or Schizoid Personality Disorder).
H. If a general medical condition or another mental disorder is present, the fear in Criterion A is unrelated to it, e.g., the fear is not of Stuttering, trembling in Parkinson's dsease, or exhibiting abnormal eating behavior in Anorexia Nervosa or Bulimia Nervosa.
Specify if: Generalized: if the fears include most social situations (also consider the additional diagnosis of Avoidant Personality Disorder)

Appendix C

DSM-IV TR Diagnostic Criteria for Separation Anxiety Disorder

Separation Anxiety Disorder
A. Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached, as evidenced by three (or more) of the following:
(1) recurrent excessive distress when separation from home or major attachment figures occurs or is anticipated (2) persistent and excessive worry about losing, or about possible harm befalling, major attachment figures (3) persistent and excessive worry that an untoward event will lead to separation from a major attachment figure (e.g., getting lost or being kidnapped) (4) persistent reluctance or refusal to go to school or elsewhere because of fear of separation (5) persistently and excessively fearful or reluctant to be alone or without major attachment figures at home or without significant adults in other settings (6) persistent reluctance or refusal to go to sleep without being near a major attachment figure or to sleep away from home (7) repeated nightmares involving the theme of separation (8) repeated complaints of physical symptoms (such as headaches, stomachaches, nausea, or vomiting) when separation from major attachment figures occurs or is anticipated
B. The duration of the disturbance is at least 4 weeks.
C. The onset is before age 18 years.
D. The disturbance causes clinically significant distress or impairment in social, academic (occupational), or other important areas of functioning.
E. The disturbance does not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and, in adolescents and adults, is not better accounted for by Panic Disorder With Agoraphobia.
Specify if: Early Onset: if onset occurs before age 6 years

Appendix D

Cognitive Schemata for Generalized Anxiety Disorder, Social Phobia, and Separation Anxiety Disorder

Generalized Anxiety Disorder	**Social Phobia**	**Separation Anxiety Disorder**
General Threat	*Core beliefs of helpless, weak, or inferior social self*	*Overestimation of danger of being left*
Personal Vulnerability	*Beliefs about others*	*Underestimation of independent functioning*
Intolerance of uncertainty	*Beliefs about disapproval*	*Overestimate the likelihood of separation*
Metacognition of worry	*Beliefs about social performance standards*	*Separation is dangerous*
	Beliefs about anxiety and its effects	*Wouldn't be able to cope with separation*

Appendix E

Screen for Child Anxiety related Emotional Disorders (SCARED) – Child Version

Screen for Child Anxiety Related Disorders (SCARED)
Child Version—Pg. 1 of 2 (To be filled out by the CHILD)

Name: _____

Date: _____

Directions:
Below is a list of sentences that describe how people feel. Read each phrase and decide if it is "Not True or Hardly Ever True" or "Somewhat True or Sometimes True" or "Very True or Often True" for you. Then for each sentence, fill in one circle that corresponds to the response that seems to describe you for the last 3 months.

	0 Not True or Hardly Ever True	1 Somewhat True or Sometimes True	2 Very True or Often True
1. When I feel frightened, it is hard to breathe.	○	○	○
2. I get headaches when I am at school.	○	○	○
3. I don't like to be with people I don't know well.	○	○	○
4. I get scared if I sleep away from home.	○	○	○
5. I worry about other people liking me.	○	○	○
6. When I get frightened, I feel like passing out.	○	○	○
7. I am nervous.	○	○	○
8. I follow my mother or father wherever they go.	○	○	○
9. People tell me that I look nervous.	○	○	○
10. I feel nervous with people I don't know well.	○	○	○
11. I get stomachaches at school.	○	○	○
12. When I get frightened, I feel like I am going crazy.	○	○	○
13. I worry about sleeping alone.	○	○	○
14. I worry about being as good as other kids.	○	○	○
15. When I get frightened, I feel like things are not real.	○	○	○
16. I have nightmares about something bad happening to my parents.	○	○	○
17. I worry about going to school.	○	○	○
18. When I get frightened, my heart beats fast.	○	○	○
19. I get shaky.	○	○	○
20. I have nightmares about something bad happening to me.	○	○	○

Screen for Child Anxiety Related Disorders (SCARED)

Child Version—Pg. 2 of 2 (To be filled out by the CHILD)

	0 Not True or Hardly Ever True	1 Somewhat True or Sometimes True	2 Very True or Often True
21. I worry about things working out for me.	○	○	○
22. When I get frightened, I sweat a lot.	○	○	○
23. I am a worrier.	○	○	○
24. I get really frightened for no reason at all.	○	○	○
25. I am afraid to be alone in the house.	○	○	○
26. It is hard for me to talk with people I don't know well.	○	○	○
27. When I get frightened, I feel like I am choking.	○	○	○
28. People tell me that I worry too much.	○	○	○
29. I don't like to be away from my family.	○	○	○
30. I am afraid of having anxiety (or panic) attacks.	○	○	○
31. I worry that something bad might happen to my parents.	○	○	○
32. I feel shy with people I don't know well.	○	○	○
33. I worry about what is going to happen in the future.	○	○	○
34. When I get frightened, I feel like throwing up.	○	○	○
35. I worry about how well I do things.	○	○	○
36. I am scared to go to school.	○	○	○
37. I worry about things that have already happened.	○	○	○
38. When I get frightened, I feel dizzy.	○	○	○
39. I feel nervous when I am with other children or adults and I have to do something while they watch me (for example: read aloud, speak, play a game, play a sport.)	○	○	○
40. I feel nervous when I am going to parties, dances, or any place where there will be people that I don't know well.	○	○	○
41. I am shy.	○	○	○

SCORING:

A total score of ≥ 25 may indicate the presence of an **Anxiety Disorder**. Scores higher that 30 are more specific.

A score of **7** for items 1, 6, 9, 12, 15, 18, 19, 22, 24, 27, 30, 34, 38 may indicate **Panic Disorder** or **Significant Somatic Symptoms**.

A score of **9** for items 5, 7, 14, 21, 23, 28, 33, 35, 37 may indicate **Generalized Anxiety Disorder**.

A score of **5** for items 4, 8, 13, 16, 20, 25, 29, 31 may indicate **Separation Anxiety Disorder**.

A score of **8** for items 3, 10, 26, 32, 39, 40, 41 may indicate **Social Anxiety Disorder**.

A score of **3** for items 2, 11, 17, 36 may indicate **Significant School Avoidance**.

**For children ages 8 to 11, it is recommended that the clinician explain all questions, or have the child answer the questionnaire sitting with an adult in case they have any questions.*

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Appendix F

Young Schema Questionnaire-Short Form (Selected Questions)

Name _____
Date_____

INSTRUCTIONS:
Listed below are statements that a person might use to describe him or herself. Please read each statement and decide how well it describes you. When there you are not sure, base your answer on what you emotionally **feel**, not on what you **think** to be true. Choose the **highest rating from 1 to 6** that describes you and write the number in the space before the statement.

RATING SCALE:
1 = Completely untrue of me
2 = Mostly untrue of me
3 = Slightly more true than untrue
4 = Moderately true of me
5 = Mostly true of me
6 = Describes me perfectly

1. _____ I find myself clinging to people I'm close to, because I'm afraid they'll leave me.

2. _____ I need other people so much that I worry about losing them.

3. _____ I'm not as talented as most people are at their work.

4. _____Most other people are more capable than I am in areas of work and achievement.

5. _____ I do not feel capable of getting by on my own in everyday life.

6. _____ I think of myself as a dependent person when it comes to everyday functioning.

7. _____ I don't feel confident about my ability to solve everyday problems that come up.

8. _____ I think of myself as a dependent person when it comes to everyday functioning.

9. _____ I must be the best at most of what I do; I can't accept second best.

10. _____ I try to do my best; I can't settle for good enough.

11. _____ I must meet all my responsibilities.

12. _____ I'm special and shouldn't have to accept many of the restrictions placed on other people.

13. _____ I feel that I shouldn't have to follow the normal rules and conventions other people do.

14. _____ I worry that I'm developing a serious illness, even though nothing serious has been diagnosed by a physician

15. _____ I worry that I'll lose all my money and become destitute

Appendix G

Cognitive Vulnerability Schema Questionnaire for Anxious Youth – Preliminary Questions (143 Items)

Generalized Anxiety Disorder		
General Threat		
Negative Outcomes (events) that threaten important life goals are more likely to happen to me	*If I experience a negative event that threatens an important life goal, it will have a serious, long-term effect on me*	*The distress and anxiety will be severe if this negative event happens*
• I'm going to get hurt in an accident • One of my parents might get hurt in an accident • One of my parents might die • My pet is going to die • my pet is going to get hurt • a burglar is going to break into our house • we are going to get robbed • I am going to get kidnapped • I am going to get sick • a terrorist is going to hurt me	• If I don't pass this test I could fail this grade • If I don't pass this test I may not be able to graduate high school • If I make the wrong choice I could lose everything I've worked so hard for.	• If I get hurt it will be too overwhelming to handle • If I fail the test I will not be able to handle my feelings • If one of my parents got hurt I wouldn't know what to do
Personal Vulnerability		
I would be unable to cope with the negative event if it occurred	*I can't control whether this negative event happens or its effects on me*	*I am weak and helpless in the face of this event*

• I can't handle scary situations • I can't handle bad things happening to me • I can't handle getting a bad grade • I wouldn't know what to do if I got a bad grade • I wouldn't know what to do if I got sick • I wouldn't know what to do if bad things happen • I wouldn't know what to do if a burglar broke into our house • I wouldn't know what to do if I got lost • I wouldn't know what to do if a terrorist attacked	• I get too scared or worried when I get a bad grade • I can't control if bad things happen • I can't control getting bad grades • I can't control getting sick • I can't control getting lost • I can't control dangerous people	• I'm not strong enough to handle bad things happening • I'm not smart enough to stop bad things from happening • It seems like bad things keep happening to me
Intolerance of Uncertainty		
Uncertainty will increase the stress and adverse effects of negative events	*It is important to be ready for any unexpected bad things that could happen to you*	*If I can reduce the doubt and ambiguity of a potentially negative situation, I will be better able to cope with it*
• Not knowing what will happen makes it worse	• I feel I need to prepare for every possible event • I need to prepare myself for the worst	

Metacognition of Worry			
Worry helps me solve problems and prepare for the worst	*If I worry, it means that I am taking a situation seriously*	*If I were a stronger person, I would be able to control my worries*	*I experience a great deal of anxiety and distress because of uncontrollable worry*

• Thinking a lot about my grades help me do better • Thinking a lot about bad things helps me prepare for them	• I worry a lot because I need to		• I get really worried when I think about things over and over
Bogles & Zigterman, 2000 Examples			
Overestimation of own responsibilities and guilt	*Overestimation of dangers concerning own health, physical integrity, etc*	*Underestimation of own competence with regard to (nonsocial) performance*	
• It's my faulty when bad things happen • We won't have the money to do what we want	• I will fall. • The police will catch me… • I'm going to get into a car accident • I'm going to be permanently injured • I may not look normal ever again • Burglar will steal things that can't be replaced • I'll always be sick • I won't get better	• I will never get a good job • I'll never go to college • I'll never graduate from high school	
Social Phobia			
Core Beliefs of helpless, weak, or inferior social self			
I'm boring	*I'm not a friendly person*	*People don't tend to like me*	*I'm socially awkward*	*I don't fit in*
• There's nothing special about me	• I'm not good at making friends	• Other kids don't want to be my friend • People don't really like to be around me	• I think a lot before I talk to other people	• I don't have a lot in common with other kids in my school
Beliefs about others				

People are critical of others	*In social situations people are always forming evaluations of each other*	*Individuals are constantly scrutinizing other people, looking for their flaws and weaknesses*
• Kids at school are mean to everyone • Kids at school make fun of everyone	• When in groups, everyone is always judging each other	• People always look for the worst in me • People are always noticing my flaws • People notice things that are bad about me • People always notice the things that are wrong with me
Beliefs about disapproval		
It is awful when others disapprove of you	*It would be horrible if others thought I was weak or incompetent*	*To embarrass yourself in front of others would be unbearable, a personal catastrophe*
• I would feel worthless if other kids didn't like me • People don't like me • People think I'm stupid • Kids act like I'm dirt • Kids ignore me • nobody ever listens to me • Nobody cares about me • What I say doesn't matter	• What other people think about me is really important • it would be horrible if other kids thought I was stupid • it would be horrible if other kids thought I was going to cry • it would be horrible if other kids thought I was a baby • it would be horrible if other kids thought I was a wimp	• I want to disappear when other kids laugh at me • I couldn't stand it if I embarrass myself in front of others • I feel like running away when I make a mistake • I feel so embarrassed when I make a mistake • They'll never my mistakes • They'll always tease me about my mistakes
Beliefs about social performance standards		
It is important not to show any signs of weakness or loss of control to others	*I must appear confident and interpersonally competent in all my social interactions*	*I must always sound intelligent and interesting to others*

• I can't blush, sweat, or shake in front of others because they will know how scared I am • I can't control when I look scared • I can't control when I blush • I'll lose control and then look worried		• I must look like I know what I'm talking about or else people will think I'm really stupid • I have to look I know what I'm talking about when I'm around other kids	• I must think a lot about what I say so I don't fumble over my words or say the wrong thing • I must always have to sounds like I'm smart • I have to be interesting • I can't be boring	
Beliefs about anxiety and its effects				
Anxiety is a sign of emotional weakness and loss of control	*It is important not to show any signs of anxiety around others*	*If people see that I'm blushing, perspiring, have shaking hands, etc., they will wonder what's wrong with me*	*If I am anxious, I won't be able to function in this social situation*	*I can't stand to feel anxious around others*
• If I feel nervous it means I'm out of control • If I get nervous it means I'm going to lose control of my feelings	• No one can know I feel anxious/nervous • I have to keep my anxiety a secret • No one can see me shake when I'm nervous	• When I blush everyone notices and thinks something is wrong with me • When I get shaky everyone notices and thinks something is wrong with me	• When I anxious/nervous/tense/worried I go blank • I'm afraid I will get so nervous I can't talk • I'm afraid I'll get so nervous I can't think • I'm afraid I 'll get so nervous I won't remember what I was going to say	• I don't like being anxious/nervous/tense/worried around others
Bogles & Zigterman, 2000 Examples				
Overestimation of criticism and rejection		*Underestimation of own competence concerning social behavior*	*Underestimation of coping*	

• They won't like me • Other kids will make fun of me • Other kids will tease me • Other kids will bully me	• I will appear awkward • When I get look anxious I'm awkward • When I'm around other people I look weird/awkward • When I'm around other people I go blank	• When I start to shake I won't be able to stop • When I get nervous I can't make it go away

Separation Anxiety Disorder				
Bogles & Zigterman, 2000 Examples				
Overestimation of danger of being left	*Underestimation of independent functioning*	*Overestimate the likelihood of separation*	*Separation is dangerous*	*Wouldn't be able to cope with separation*
• If I'm away from my parent, then something bad may happen to her/him • If I'm away from my parent, then something bad may happen to me	• I can't make it on my own • Being away from my parent would be the worst thing ever • I won't be able to handle being away from my parent • I get really scared when I know my parent has to leave • I'll make mistakes if I'm without my mom • I'll get hurt if I'm without my mom • I'll fail if I'm not with my mom • I can't do anything right without my mom • I make the wrong choices without my mom	• If I'm away from my parent, then I'll get hurt • If I'm away from my parent, then they'll get hurt • I'm afraid I'm going to get separated from my parents • I'm afraid I'm going to get lost • I'm afraid my parents are going to forget me	• when I'm not with my mom she could get hurt • when I'm not with my dad he could get hurt • when I'm not with my mom she could get killed • when I'm not with my dad he could be killed • when I'm not with my mom she might get sick	• I'd be really really scared and not know what to do if I were separated from my mom • I'd start crying and I wouldn't be able to stop if I were separated from my mom • I'd get really shakey and I wouldn't be able to stop if I were separated from my mom • My head would fill up with scary thoughts that wouldn't go away if I were separated from my mom.

Appendix H

Cognitive Vulnerability Schema Questionnaire for Anxious Youth – Item Loading Questionnaire (133 Items)

The Cognitive Vulnerability Schema Questionnaire for Anxious Youth (CVSQ-AY) – Item

Name _____Date_____

INSTRUCTIONS:

Listed below are statements that a person might use to describe him or herself. Please read each statement and decide how well it describes Generalized Anxiety Disorder (GAD), Social Phobia (SoP), or Separation Anxiety Disorder (SAD). Please designate each question according to the disorder you think the statement most closely represents. When there you are not sure, please choose the option that most closely fits the descriptions below. Also, please provide any additional comments.

Generalized Anxiety Disorder (GAD)	**Social Phobia (SoP)**	**Separation Anxiety Disorder (SAD)**
Excessive anxiety and worry about a number of events or activities that is difficult to control	A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others.	Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached

	GAD	**SoP**	**SAD**	**Comments**
I can't control when I blush	☐	☐	☐	
I can't control if bad things happen	☐	☐	☐	
Kids at school make fun of everyone	☐	☐	☐	
People always look for the worst in me	☐	☐	☐	
I would feel worthless if other kids didn't like me	☐	☐	☐	
My pet is going to get hurt	☐	☐	☐	

I'm afraid my parents are going to forget me	☐	☐	☐	
I can't control when I look scared	☐	☐	☐	
People don't like me	☐	☐	☐	

Generalized Anxiety Disorder (GAD)	**Social Phobia (SOP)**	**Separation Anxiety Disorder (SAD)**
Excessive anxiety and worry about a number of events or activities that is difficult to control	A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others.	Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached

	GAD	**SoP**	**SAD**	**Comments**
There's nothing special about me	☐	☐	☐	
It would be horrible if other kids thought I was a wimp	☐	☐	☐	
I'll fail if I'm not with my mom	☐	☐	☐	
I can't handle getting a bad grade	☐	☐	☐	
One of my parents might get hurt in an accident	☐	☐	☐	
Kids ignore me	☐	☐	☐	
When I'm not with my dad he could be killed	☐	☐	☐	
I can't make it on my own	☐	☐	☐	
I'll lose control and then look worried	☐	☐	☐	
I wouldn't know what to do if I got a bad grade	☐	☐	☐	

If I make the wrong choice I could lose everything I've worked so hard for.	☐	☐	☐	
If I'm away from my parent, then they'll get hurt	☐	☐	☐	
A burglar is going to break into our house	☐	☐	☐	

Generalized Anxiety Disorder (GAD)	**Social Phobia (SOP)**	**Separation Anxiety Disorder (SAD)**
Excessive anxiety and worry about a number of events or activities that is difficult to control	A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others.	Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached

	GAD	**SoP**	**SAD**	**Comments**
I don't have a lot in common with the other kids in my school	☐	☐	☐	
I am going to get sick	☐	☐	☐	
People are always noticing my flaws	☐	☐	☐	
My head would fill up with scary thoughts that wouldn't go away if I were separated from my mom.	☐	☐	☐	
I make the wrong choices without my mom	☐	☐	☐	
I can't control dangerous people	☐	☐	☐	
What other people think about me is really important	☐	☐	☐	
We are going to get robbed	☐	☐	☐	

I'll never graduate from high school	☐	☐	☐	
They'll never make my mistakes	☐	☐	☐	
Burglar will steal things that can't be replaced	☐	☐	☐	
I wouldn't know what to do if I got lost	☐	☐	☐	
When in groups, everyone is always judging each other	☐	☐	☐	
Nobody cares about me	☐	☐	☐	

Generalized Anxiety Disorder (GAD)	**Social Phobia (SOP)**	**Separation Anxiety Disorder (SAD)**
Excessive anxiety and worry about a number of events or activities that is difficult to control	A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others.	Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached

	GAD	**SoP**	**SAD**	**Comments**
I'd start crying and I wouldn't be able to stop if I were separated from my mom	☐	☐	☐	
When I'm around other people I look weird/awkward	☐	☐	☐	
I'll always be sick	☐	☐	☐	
I'm afraid I will get so nervous I can't talk	☐	☐	☐	
I can't be boring	☐	☐	☐	
I'm going to be permanently injured	☐	☐	☐	

No one can know I feel anxious/nervous	☐	☐	☐	
When I get nervous I can't make it go away	☐	☐	☐	
I must always have to sound like I'm smart	☐	☐	☐	
I wouldn't know what to do if bad things happen	☐	☐	☐	
I don't like being anxious/nervous/tense/worried around others	☐	☐	☐	
I get really scared when I know my parent has to leave	☐	☐	☐	
Other kids will make fun of me	☐	☐	☐	

Generalized Anxiety Disorder (GAD)	**Social Phobia (SOP)**	**Separation Anxiety Disorder (SAD)**
Excessive anxiety and worry about a number of events or activities that is difficult to control	A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others.	Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached

	GAD	**SoP**	**SAD**	**Comments**
No one can see me shake when I'm nervous	☐	☐	☐	
It is my fault when bad things happen	☐	☐	☐	
People notice things that are bad about me	☐	☐	☐	
They won't like me	☐	☐	☐	

If I get nervous it means I'm going to lose control of my feelings	☐	☐	☐	
Nobody ever listens to me	☐	☐	☐	
When I get anxious I look awkward	☐	☐	☐	
I can't blush, sweat, or shake in front of others because they will know how scared I am	☐	☐	☐	
They'll always tease me about my mistakes	☐	☐	☐	
I'd be really, really scared and not know what to do if I were separated from my mom	☐	☐	☐	
I want to disappear when other kids laugh at me	☐	☐	☐	
I am going to get kidnapped	☐	☐	☐	
I'm afraid I'm going to get lost	☐	☐	☐	
I have to be interesting	☐	☐	☐	

Generalized Anxiety Disorder (GAD)	**Social Phobia (SOP)**	**Separation Anxiety Disorder (SAD)**
Excessive anxiety and worry about a number of events or activities that is difficult to control	A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others.	Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached

	GAD	**SoP**	**SAD**	**Comments**
Being away from my parent would be the worst thing ever	☐	☐	☐	

People always notice the things that are wrong with me	☐	☐	☐	
I have to look I know what I'm talking about when I'm around other kids	☐	☐	☐	
I get too scared or worried when I get a bad grade	☐	☐	☐	
If one of my parents got hurt I wouldn't know what to do	☐	☐	☐	
I'll never go to college	☐	☐	☐	
It seems like bad things keep happening to me	☐	☐	☐	
I'll get hurt if I'm without my mom	☐	☐	☐	
I couldn't stand it if I embarrass myself in front of others	☐	☐	☐	
I wouldn't know what to do if a terrorist attacked	☐	☐	☐	
Other kids will bully me	☐	☐	☐	
I wouldn't know what to do if I got sick	☐	☐	☐	
When I get shaky everyone notices and thinks something is wrong with me	☐	☐	☐	

Generalized Anxiety Disorder (GAD)	**Social Phobia (SOP)**	**Separation Anxiety Disorder (SAD)**
Excessive anxiety and worry about a number of events or activities that is difficult to control	A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others.	Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached

	GAD	SoP	SAD	Comments
I think a lot before I talk to other people	☐	☐	☐	
If I'm away from my parent, then I'll get hurt	☐	☐	☐	
I must think a lot about what I say so I don't fumble over my words or say the wrong thing	☐	☐	☐	
I won't pass the test	☐	☐	☐	
it would be horrible if other kids thought I was a baby	☐	☐	☐	
When I'm not with my dad he could get hurt	☐	☐	☐	
Kids act like I'm dirt	☐	☐	☐	
I will appear awkward	☐	☐	☐	
I can't control getting lost	☐	☐	☐	
Kids at school are mean to everyone	☐	☐	☐	
I can't do anything right without my mom	☐	☐	☐	
People think I'm stupid	☐	☐	☐	
It would be horrible if other kids thought I was going to cry	☐	☐	☐	
I wouldn't know what to do if a burglar broke into our house	☐	☐	☐	

Generalized Anxiety Disorder (GAD)	Social Phobia (SOP)	Separation Anxiety Disorder (SAD)
Excessive anxiety and worry about a number of events or activities that is difficult to control	A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others.	Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached

	GAD	SoP	SAD	Comments
I'm afraid I'll get so nervous I can't think	☐	☐	☐	
I must look like I know what I'm talking about or else people will think I'm really stupid	☐	☐	☐	
When I'm around other people I go blank	☐	☐	☐	
A terrorist is going to hurt me	☐	☐	☐	
When I'm not with my mom she could get killed	☐	☐	☐	
When I blush everyone notices and thinks something is wrong with me	☐	☐	☐	
When I start to shake I won't be able to stop	☐	☐	☐	
When I'm not with my mom she could get hurt	☐	☐	☐	
I will fall…	☐	☐	☐	
I have to keep my anxiety a secret	☐	☐	☐	
Other kids will tease me	☐	☐	☐	
I can't control getting bad grades	☐	☐	☐	

I'm afraid I 'll get so nervous I won't remember what I was going to say	☐	☐	☐	
If I feel nervous it means I'm out of control	☐	☐	☐	

Generalized Anxiety Disorder (GAD)	**Social Phobia (SOP)**	**Separation Anxiety Disorder (SAD)**
Excessive anxiety and worry about a number of events or activities that is difficult to control	A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others.	Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached

	GAD	**SoP**	**SAD**	**Comments**
I'm going to get into a car accident	☐	☐	☐	
When I'm anxious/nervous/tense/worried I go blank	☐	☐	☐	
I feel so embarrassed when I make a mistake	☐	☐	☐	
I may not look normal ever again	☐	☐	☐	
I'm not good at making friends	☐	☐	☐	
I'm not smart enough to stop bad things from happening	☐	☐	☐	
One of my parents might die	☐	☐	☐	
I need to prepare myself for the worst	☐	☐	☐	
I'd get really shaky and I wouldn't be able to stop if I were separated from my mom	☐	☐	☐	

I can't handle scary situations	☐	☐	☐	
Other kids don't want to be my friend	☐	☐	☐	
I can't control getting sick	☐	☐	☐	
If I'm away from my parent, then something bad may happen to her/him	☐	☐	☐	

Generalized Anxiety Disorder (GAD)	**Social Phobia (SOP)**	**Separation Anxiety Disorder (SAD)**
Excessive anxiety and worry about a number of events or activities that is difficult to control	A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others.	Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached

	GAD	**SoP**	**SAD**	**Comments**
Not knowing what will happen makes it worse	☐	☐	☐	
I'm not strong enough to handle bad things happening	☐	☐	☐	
If I don't pass this test I could fail this grade	☐	☐	☐	
People don't really like to be around me	☐	☐	☐	
I'll make mistakes if I'm without my mom	☐	☐	☐	
I'm going to get hurt in an accident	☐	☐	☐	
The police will catch me…	☐	☐	☐	
Thinking a lot about my grades help me do better	☐	☐	☐	

If I'm away from my parent, then something bad may happen to me	☐	☐	☐	
Thinking a lot about bad things helps me prepare for them	☐	☐	☐	
What I say doesn't matter	☐	☐	☐	
I worry a lot because I need to	☐	☐	☐	
It would be horrible if other kids thought I was stupid	☐	☐	☐	

Generalized Anxiety Disorder (GAD)	**Social Phobia (SOP)**	**Separation Anxiety Disorder (SAD)**
Excessive anxiety and worry about a number of events or activities that is difficult to control	A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others.	Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached

	GAD	**SoP**	**SAD**	**Comments**
I will never get a good job	☐	☐	☐	
I get really worried when I think about things over and over	☐	☐	☐	
We won't have the money to do what we want	☐	☐	☐	
When I get look anxious I'm awkward	☐	☐	☐	
If I fail the test I will not be able to handle my feelings	☐	☐	☐	
I feel I need to prepare for every possible event	☐	☐	☐	

I feel like running away when I make a mistake	☐	☐	☐	
I'm afraid I'm going to get separated from my parents	☐	☐	☐	
If I don't pass this test I may not be able to graduate high school	☐	☐	☐	
I can't handle bad things happening to me	☐	☐	☐	
If I get hurt it will be too overwhelming to handle	☐	☐	☐	
I won't be able to handle being away from my parent	☐	☐	☐	
My pet is going to die	☐	☐	☐	

Generalized Anxiety Disorder (GAD)	**Social Phobia (SOP)**	**Separation Anxiety Disorder (SAD)**
Excessive anxiety and worry about a number of events or activities that is difficult to control	A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others.	Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached

	GAD	**SoP**	**SAD**	**Comments**
I won't get better	☐	☐	☐	
When I'm not with my mom she might get sick	☐	☐	☐	

Appendix I

Cognitive Vulnerability Schema Questionnaire for Anxious Youth – Item Rating Questionnaire (68 Items)

The Cognitive Vulnerability Schema Questionnaire for Anxious Youth (CVSQ-AY) – Item Rating

Name _____Date_____

INSTRUCTIONS:

Listed below are statements that a person might use to describe him or herself. Please read each statement and decide how well it describes an anxious cognitive schema of an individual with Generalized Anxiety Disorder (GAD), Social Phobia (SoP), or Separation Anxiety Disorder (SAD). Please mark how well you think this statement describes an anxious cognitive schema for that disordder. Also, please provide any additional comments.

Generalized Anxiety Disorder (GAD)

Excessive anxiety and worry about a number of events or activities that is difficult to control

	Weak Schema Item 1	**2**	**3**	**4**	**Strong Schema Item 5**	**Comments**
I can't control if bad things happen	☐	☐	☐	☐	☐	
Bad things would happen if I got a bad grade on my homework	☐	☐	☐	☐	☐	
If I make the wrong choice I could lose everything I've worked so hard for.	☐	☐	☐	☐	☐	
I am going to get sick	☐	☐	☐	☐	☐	

I can't control dangerous people	☐	☐	☐	☐	☐	
I'll never graduate from high school	☐	☐	☐	☐	☐	
If I get nervous it means I'm going to lose control of my feelings	☐	☐	☐	☐	☐	
I get really scared or worried when I get a bad grade	☐	☐	☐	☐	☐	
When I grow up I won't get a good job	☐	☐	☐	☐	☐	
I wouldn't know what to do if a terrorist attacked	☐	☐	☐	☐	☐	
I wouldn't know what to do if I got sick	☐	☐	☐	☐	☐	
I'm afraid I won't pass my tests	☐	☐	☐	☐	☐	
A terrorist is going to hurt me	☐	☐	☐	☐	☐	
I can't control doing bad in school	☐	☐	☐	☐	☐	
I'm going to get into a car accident	☐	☐	☐	☐	☐	
When I'm anxious, nervous, or worried I don't know what to do	☐	☐	☐	☐	☐	
I need to get ready for when bad things happen	☐	☐	☐	☐	☐	
I don't know what to do when something scary is happening	☐	☐	☐	☐	☐	
I can't control getting sick	☐	☐	☐	☐	☐	

Not knowing what will happen makes it worse	☐	☐	☐	☐	☐	
I'm not strong enough to deal with bad things happening	☐	☐	☐	☐	☐	
If I don't do well on every homework then I could fail this grade	☐	☐	☐	☐	☐	
I'm going to get hurt in an accident	☐	☐	☐	☐	☐	
Thinking a lot about bad things helps me prepare for them	☐	☐	☐	☐	☐	
I will never get a good job	☐	☐	☐	☐	☐	
I get really worried when I think about things over and over	☐	☐	☐	☐	☐	
We won't have the money to do what we want	☐	☐	☐	☐	☐	
I feel I need to prepare for every possible event	☐	☐	☐	☐	☐	
If I don't pass this test I may not be able to graduate high school	☐	☐	☐	☐	☐	
	☐	☐	☐	☐	☐	
	☐	☐	☐	☐	☐	

Social Phobia (SOP)

A marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others

	Weak Schema Item 1	2	3	4	Strong Schema Item 5	Comments
I would feel really bad if other kids didn't like me	☐	☐	☐	☐	☐	
People don't like me	☐	☐	☐	☐	☐	
People are always noticing the things that are wrong with me	☐	☐	☐	☐	☐	
What other people think about me is really important	☐	☐	☐	☐	☐	
When in groups, everyone is always judging each other	☐	☐	☐	☐	☐	
When I'm around other people I look weird or awkward	☐	☐	☐	☐	☐	
Other kids will make fun of me	☐	☐	☐	☐	☐	
I don’t want others to see me shake when I'm nervous	☐	☐	☐	☐	☐	
I don’t want to blush, sweat, or shake in front of others because they will know how scared I am	☐	☐	☐	☐	☐	
I have to look I know what I'm talking about when I'm around other kids	☐	☐	☐	☐	☐	
I think a lot before I talk to other people	☐	☐	☐	☐	☐	

It would be horrible if other kids thought I was a baby	☐	☐	☐	☐	☐	
I must look like I know what I'm talking about or else people will think I'm really stupid	☐	☐	☐	☐	☐	
When I'm around other people I forget what I'm going to say	☐	☐	☐	☐	☐	
It would be really bad if other kids thought I was stupid	☐	☐	☐	☐	☐	
When I look nervous people think I'm weird	☐	☐	☐	☐	☐	
I would feel really bad if other kids didn't like me	☐	☐	☐	☐	☐	
People don't like me	☐	☐	☐	☐	☐	
People are always noticing the things that are wrong with me	☐	☐	☐	☐	☐	
What other people think about me is really important	☐	☐	☐	☐	☐	
When in groups, everyone is always judging each other	☐	☐	☐	☐	☐	
When I'm around other people I look weird or awkward	☐	☐	☐	☐	☐	
Other kids will make fun of me	☐	☐	☐	☐	☐	
I don't want others to see me shake when I'm nervous	☐	☐	☐	☐	☐	

I don't want to blush, sweat, or shake in front of others because they will know how scared I am	☐	☐	☐	☐	☐	
I have to look I know what I'm talking about when I'm around other kids	☐	☐	☐	☐	☐	
I think a lot before I talk to other people	☐	☐	☐	☐	☐	
It would be horrible if other kids thought I was a baby	☐	☐	☐	☐	☐	
I must look like I know what I'm talking about or else people will think I'm really stupid	☐	☐	☐	☐	☐	
When I'm around other people I forget what I'm going to say	☐	☐	☐	☐	☐	
It would be really bad if other kids thought I was stupid	☐	☐	☐	☐	☐	
When I look nervous people think I'm weird	☐	☐	☐	☐	☐	

Separation Anxiety Disorder (SAD)

Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached

	Weak Schema Item				**Strong Schema Item**	
	1	**2**	**3**	**4**	**5**	**Comments**
I'm afraid my parents are going to forget me	☐	☐	☐	☐	☐	

I won’t do well if I’m not with my mom	☐	☐	☐	☐	☐	
One of my parents might get hurt in an accident	☐	☐	☐	☐	☐	
When I'm not with my parent they could be killed	☐	☐	☐	☐	☐	
If I'm away from my parent, then they'll get hurt	☐	☐	☐	☐	☐	
My head would fill up with scary thoughts that wouldn't go away if I were separated from my parent	☐	☐	☐	☐	☐	
I make the wrong choices without my parent	☐	☐	☐	☐	☐	
I'd start crying and I wouldn't be able to stop if I were separated from my parent	☐	☐	☐	☐	☐	
I get really scared when I know my parent has to leave	☐	☐	☐	☐	☐	
I'd be really, really scared and not know what to do if I were separated from my parent	☐	☐	☐	☐	☐	
Being away from my parent would be the worst thing ever	☐	☐	☐	☐	☐	
If one of my parents got hurt I wouldn't know what to do	☐	☐	☐	☐	☐	

I'll get hurt if I'm without my mom	☐	☐	☐	☐	☐	
If I'm away from my parent, then I'll get hurt	☐	☐	☐	☐	☐	
When I'm not with my parent, they could get hurt	☐	☐	☐	☐	☐	
I can't do anything right without my mom	☐	☐	☐	☐	☐	
When I'm not with my mom she could get hurt	☐	☐	☐	☐	☐	
I'd get really shaky and I wouldn't be able to stop if I were separated from my mom	☐	☐	☐	☐	☐	
If I'm away from my parent, then something bad may happen to them	☐	☐	☐	☐	☐	
If I'm away from my parent, then something bad may happen to me	☐	☐	☐	☐	☐	
I'm afraid I'm going to get separated from my parents	☐	☐	☐	☐	☐	
I won't be able to handle being away from my parent	☐	☐	☐	☐	☐	
When I'm not with my mom she might get sick	☐	☐	☐	☐	☐	

Appendix J

Cognitive Vulnerability Schema Questionnaire for Anxious Youth – Final 46 Itmes

Name _____ Date_____

DIRECTIONS:

Listed below are statements that a person might use to describe him or herself. **Please read each statement and then choose how well the statement describes you or your feelings over the past year.** When you are not sure, base your answer on how you feel most of the time.

	I *NEVER or HARDLY EVER* feel like this	I *SOMETIMES* feel like this	I *ALWAYS* or VERY OFTEN feel like this
1. I won't be able to handle being away from my parent	☐	☐	☐
2. It would be really bad if other kids thought I was stupid	☐	☐	☐
3. When I get older, I feel like I won't get a good job	☐	☐	☐
4. When I'm around other people I feel like I look weird or awkward	☐	☐	☐
5. I can't control if bad things happen	☐	☐	☐
6. I don't want others to see me shake when I'm nervous or anxious	☐	☐	☐
7. I'd be really, really scared and not know what to do if I were separated from my parent	☐	☐	☐
8. If one of my parents got hurt I wouldn't know what to do	☐	☐	☐
9. When in groups, everyone is always judging each other	☐	☐	☐
10. I can't control doing bad in school	☐	☐	☐
11. I'm not strong enough to deal with bad things happening	☐	☐	☐
12. I'm going to get hurt in a bad accident	☐	☐	☐

13. I need to get ready for when bad things happen	☐	☐	☐
14. I'd start crying and I wouldn't be able to stop if I were separated from my parent for a short amount of time	☐	☐	☐
15. I won't do well or I'll have a breakdown if I'm not with my parent	☐	☐	☐
16. I would feel really bad if other kids didn't like me	☐	☐	☐
17. I make the wrong choices without my parent around	☐	☐	☐
18. I get really worried when I think about things over and over	☐	☐	☐
19. I get really scared when I know my parent has to leave	☐	☐	☐
20. When I'm anxious, nervous, or worried I don't know what to do	☐	☐	☐
21. When I look nervous people think I'm weird	☐	☐	☐
22. People are always noticing the things that are wrong with me	☐	☐	☐
23. What other people think about me is really important	☐	☐	☐
24. If I'm away from my parent, then something bad may happen to them	☐	☐	☐
25. I can't control dangerous people	☐	☐	☐
26. If I don't do well on every homework then I won't be able to go to the next grade	☐	☐	☐
27. I feel I need to prepare for every possible event	☐	☐	☐
28. If I make the wrong choice I could lose everything I've worked so hard for	☐	☐	☐
29. I'm afraid I'm going to get separated from my parents	☐	☐	☐
30. Thinking a lot about bad things helps me prepare for them	☐	☐	☐
31. It would be horrible if other kids thought I was a baby	☐	☐	☐

32. I get really scared or worried when I get a bad grade	☐	☐	☐
33. If I don't pass my test I may not be able to graduate high school	☐	☐	☐
34. When I'm around other people I forget what I'm going to say	☐	☐	☐
35. I'm afraid my parents are going to forget me	☐	☐	☐
36. Being away from my parent for a little while would be the worst thing ever	☐	☐	☐
37. My head would fill up with scary thoughts that wouldn't go away if I were separated from my parent for a little while	☐	☐	☐
38. If I'm away from my parent, then something bad may happen to me	☐	☐	☐
39. When I'm not with my parent they could be killed	☐	☐	☐
40. If I'm away from my parent, then they'll get hurt	☐	☐	☐
41. I don't want to turn red, sweat, or shake in front of others because they will know how scared, nervous, or anxious I am	☐	☐	☐
42. I have to look like I know what I'm talking about when I'm around other kids	☐	☐	☐
43. I think a lot before I talk to other people so I don't say the wrong thing	☐	☐	☐
44. I'm afraid I won't pass my tests	☐	☐	☐
45. I must look like I know what I'm talking about or else people will think I'm really stupid	☐	☐	☐
46. People don't like me	☐	☐	☐

Appendix K

Demographic Information Survey

Directions: These questions ask some basic information about you and your children (if you have more than one child, please select one between the ages of 7-17 years old to answer the questions about). Please fill in blanks or circle response.

1. What is your gender / birth year? **A = Male B = Female / 19**_____
2. What is your child's gender? **A = Male B = Female**
3. What is your child's birthdate (month/year)? _____
4. Is this your biological child? **A = Yes B = No**
5. What grade and school does your child attend? Grade_____
   School_____
6. What is your child's ethnicity?

   A = African American B = Caucasian C = Native American
   D = Asian American E = Hispanic F = Other
   _____
7. What is the highest level of education you have completed?

   A = High School or GED B = Some College C = College Graduate
   D = Master's Degree E = Doctorate/Professional Degree
8. What is your marital status?

   A = Married B = Single C = Living with Partner D = Divorced E = Widowed
9. Has your child ever been formally diagnosed with any type of psychological disorder (ie; Learning Disability, ADHD, Depression, Anxiety…etc)?

   A = No B = Yes (Please specify)_____

10. If your child's responses indicate that your he/she has a higher than typical amount of anxiety for their age, would you like to be contacted? You would then have the opportunity for further testing and possible invitation into a treatment study.

No, I do not wish to be contacted

Yes, I wish to be contacted and am including my name & phone # below:

_____

Appendix L

Parent Consent

PARENTAL PERMISSION FOR CHILDREN PARTICIPATION IN RESEARCH

Title: Development and Validation of the Cognitive Vulnerability Schema Questionnaire for Anxious Youth

Introduction

The purpose of this form is to provide you with information that may affect your decision as to whether or not to allow your child to participat in this research study. If you decide to be involved in this study, this form will be used to record your consent.

Purpose of the Study

Your child has been asked to complete these questionnaires as part of a research study investigating the utility of the Cognitive Vulnerability Schema Questionnaire for Anxious Youth for use with a clinical and community population.

What will you be asked to do?

If you agree to participate, you will be asked to fill out a demographic questionnaire that discusses background information on your child. Your child will be asked to answer questions on three questionnaires about anxiety symptoms and anxious thoughts that they may experience. The questionnaires should take your child a maximum of 20 minutes to complete. There will be more than 450 other youth participating.

What are the risks involved?

There are no other foreseeable risks to participating in this study.

What are the possible benefits?

- Increased insight into your child's emotional functioning
- Contribute to the advancement of research about childhood anxiety disorders
- Possible inclusion in treatment study for youth experiencing anxiety symptoms

Do you have to participate?

No, your participation is voluntary. You may decide not to participate at all or, if you begin, you or your child may stop at any time, thus withdrawing your interest in participating in the study. Withdrawal or refusing to participate will not affect your relationship with The University of Texas at Austin or the Texas Child Study Center in any way.

If you would like your child to participate, please sign this form and return it in your packet to the study coordinator. Please keep one copy of this form for your records.

If the results from these measures indicate that your child has a higher than typical amount of anxiety symptoms for his/her age, then you can choose to be contacted and given the opportunity for him/her to receive further testing at the Texas Child Study Center and potentially be invited to participate in an anxiety treatment study. There would be no expense and you would be under no obligation to do so.

Will there be any compensation?

Your child will receive $5 for participating in this study in either the form of a small prize (youth aged 7-12) or a $5 gift card (youth aged 13-17). They will receive the compensation upon completion and return of all measures in the packet.

What are my confidentiality or privacy protections when participating?

Information provided by participants in this study will be completely confidential. The identities of the participants will not be directly associated with the survey information and will be matched using a numeric coding system. The numeric coded data resulting from your participation may be used for future research or be made available to other researchers for purposes not detailed within this consent form.

Whom to contact with questions about the study?

Prior, during or after your participation you can contact the Principal Investigator, Samantha Marie Winton at SamWinton@gmail.com or (727)-480-9362. This study has been reviewed and approved by The University of Texas Insitituional Revew Board and the study number is 2013-03-0084. For questions about your rights or to report dissatisfaction with any part of this study, you can contact, the Institutional Review Board by phone (anonymously if you wish) at (512)-471-8871 or email at orsc@uts.cc.utexas.edu.

Signature

You have been informed about this study's prupose, procedures, possible benefits and risks, and you have received a copy of this form. You voluntarily agree for you and your child to participate in this study. By signing this form, you are not waiving any of your legal rights. Please keep a copy of this document.

_____

Printed Name

_____ _____

Signature Date

As a representative of this study, I have explained the purpose, procedures, benefits, and the risks involved in this research study.

_____
Printed Name of Person obtaining consent

_____ _____
Signature of Investigator Date

Appendix M

Youth Assent

ASSENT FOR PARTICIPATION IN RESEARCH

Title: Development and Validation of the Cognitive Vulnerability Schema Questionnaire for Anxious Youth

Introduction

You have been asked to be in a research study about the way children and teenagers see the world. This study was explained to your parent and they said that you could be in it if you want to. We are doing this study to understand the way children and teenagers thing about things that make them nervous or scared.

What am I going to be asked to do

If you agree to be in this study, you will be asked to fill out three questionnaires about your feelings. This will take you less than 20 minutes to complete. There will be between 150-450 people doing the same thing as you for this study.

What are the risks involved in this study?

You are being asked to answer quite a few questions. At times during the study, you may get tired of reading. There are no other risks to participating in this study.

Do I have to participate?

No, participation is voluntary. You should only be in the study if you want to. You can even decide you want to be in the study now, and change your mind later. No one will be upset.

If you would like to participate sign this form. You will receive a copy of this form so if you want to you can look at it later.

Will I get anything to participate?

You will receive $5 for participating in this study in either the form of a small prize (youth aged 7-12) or a $5 gift card (youth aged 13-17). You will get your prize when you and your parent finish filling out all of the forms and return them in the packet.

Who will know about my participation in this research study?

The records of this study will be kept private. Your responses may be used for a future study by these researchers or other researchers.

Signature

Writing your name on this page means that the page was read by you or to you and that you agree to be in the study. If you have any questions before, after, or during the study, as the person in charge. If you decide to quit the study, all you have to do is tell the person in charge.

_____ _____

Signature of Participant Date

References

Abramson, L. Y., Metalsky, G. L., & Alloy, L. B. (1989). Hopelessness depression: A theory-based subtype of depression. *Psychological Review, 96*, 358-372.

Ainsworth, M., Blehar, M. C., Waters, E., & Wall, S. (1978). Patterns of attachment: A psychological study of the strange situation. Oxford England: Lawrence Erlbaum.

Allen, J. L., Lavallee, K. L., Herren, C., Ruhe, K., & Schneider, S. (2010). DSM-IV criteria for childhood separation anxiety disorder: Informant, age, and sex differences. *Journal Of Anxiety Disorders, 24*(8), 946-952.

Alloy, L. B., Abramson, L. Y., Murray, L. A., Whitehouse, W. G., & Hogan, M. E. (1997). Self-referent information processing in individuals at high and low cognitive risk for depression. *Cognition and Emotion, 11*, 539-568.American Psychiatric Association (APA). (1994). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: Author.

American Psychiatric Association. (1980). Diagnostic and statistical manual of mental disorders (DSM-III) (3th ed.). Washington, DC: Author.

American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (DSM-IV) (4th ed.). Washington, DC: Author.

American Psychiatric Association. (2000). Diagnostic and statistical manual of mental disorders (DSM-IV-TR) (4th ed.). Washington, DC: Author.

Anderson, J. C., Williams, S., McGee, R., & Silva, P.A. (1987). DSM-III disorders in preadolescent children: Prevalence in a large sample from the general population. *Archives of General Psychiatry, 44*, 69-77.

Aschenbrand, S. G., Kendall, P. C., Webb, A., Safford, S. M., & Flannery-Schroeder, E. (2003). Is childhood separation anxiety disorder a predictor of adult panic disorder and agoraphobia? A seven-year longitudinal study. *Journal of the American Academy of Child and Adolescent Psychiatry, 42*, 1478-1485.

Barenboim, C. (1981). The development of person perception in childhood and adolescence: From behavioral comparisons to psychological constructs to psychological comparisons. *Child Development, 52*, 129-144.Barlow, D. H. (2002). Anxiety and its disorders: The nature and treatment of anxiety and panic (2nd ed.). Ney York: Guilford Press.

Barlow, D. H., Allen, L. B., & Choate, M. L., (2004). Toward a unified treatment of emotional disorders. *Behavioral Therapy, 35*, 205-230.

Baumrind, D. (1989). Rearing competent children. In W. Damon (Ed.), *Child Development Today and Tomorrow* (pp. 349-378). San Francisco: Jossey-Bass.

Beck, A. (1984). Cognitive approaches to stress. In Woolfolk, R. W. & Lehrer P. M. (Eds), Principles and practice ofstress management. New York: The Guilford Press.Beck, A. T. (1967). Depression: Clinical, experimental, and theoretical aspects. New York: Harper& Row.

Beck, A. T. (1985). Theoretical perspectives on clinical anxiety. In A. H. Tuma & J. Maser (Eds.), *Anxiety and the anxiety disorders* (pp. 183-196). Hillsdale, NJ: Eflbaum.

Beck, A. T., & Emery, G. (with Greenberg, R. L.). (1985). Anxiety disorders and phobias: A cognitive perspective. New York: Basic Books.

Beck, A. T., & Emery, G. (with Greenberg, R. L.). (2005). Anxiety disorders and phobias: A cognitive perspective (rev. paperback ed.). New York: Basic Books.

Becker, C. B., Namour, N., Zayfert C., & Hegel, M. T. (2001). Specificity of the Social Interaction Self-Statement Test in social phobia. *Cognitive Therapy and Research, 25*, 227-233.

Beidel, D. C., &Turner, S. M. (2005). *Childhood Anxiety Disorders. A Guide to Research and Treatment.* New York: Routledge.

Beidel, D. C., Turner, S. M., & Dancu, C. V. (1985). Psychological, cognition and behavioral aspects of social anxiety. *Behaviour Research and Therapy, 23*, 109-117.

Beidel, D. C., Turner, S. M., & Morris, T. L. (1995). A new inventory to assess childhood social anxiety and phobia: The Social Phobia and Anxiety Inventory for Children. *Psychological Assessment, 7*, 73-79.

Beidel, D. C., Turner, S. M., & Morris, T. L. (1999). Psychopathology of childhood social phobia. *Journal of the American Academy of Child and Adolescent Psychiatry, 38*, 643-650.

Beidel, D. C., Turner, S. M., & Morris, T. L. (2000). Behavioral treatment of childhood social phobia. *Journal of Consulting and Clinical Psychology, 68*, 1072-1080.

Benjamin, R. S., Costello, E. J., & Warren, M. (1990). Anxiety disorders in a pediatric sample. *Journal of Anxiety Disorders, 4*, 293-316.

Bernstein, A., & Zvolensky, M. J. (2007). Anxiety sensitivity: Selective review of promising research and future directions. Expert Review in Neurotherapeutics, 2, 97–101.

Bernstein, G. A., Bernat, D. H., Davis, A. A., & Layne, A. E. (2008). Symptom presentation and classroom functioning in a nonclinical sample of children with social phobia. Depression and Anxiety, 25, 752-760. Bird, H. R., Gould, M. S., Yager, T., & Staghezza, B. (1989). Risk factors for maladjustment in Puerto Rican children. *Journal Of The American Academy Of Child & Adolescent Psychiatry, 28*(6), 847-850.

Birmaher, B., Khetarpal, S., Brent, D., & Cully, M. (1997). The Screen for Child Anxiety Related Emotional Disorders (SCARED): Scale construction and psychometric characteristics. *Journal Of The American Academy Of Child & Adolescent Psychiatry, 36*(4), 545-553.

Bögels, S. M., & Zigterman, D. (2000). Dysfunctional cognitions in children with social phobia, separation anxiety disorder, and generalized anxiety disorder. *Journal Of Abnormal Child Psychology, 28*(2), 205-211.

Borkovec, T. D., Abel, J. L., & Newman, H. (1995). Effects of psychotherapy on comorbid conditions in generalized anxiety disorder. *Journal Of Consulting And Clinical Psychology, 63*(3), 479-483.

Bowen, R. C., Offord, D. R., & Boyle, M. H. (1990). The prevalence of overanxious disorder and separation anxiety disorder: Results from the Ontario Child Health

Study. *Journal Of The American Academy Of Child & Adolescent Psychiatry, 29*(5), 753-758.

Bowlby, J. (1969). Disruption of affectional bonds and its effects on behavior. Canada's Mental Health Supplement, 59

Bowlby, J. (1982). Attachment and loss: Retrospect and prospect. American *Journal Of Orthopsychiatry, 52*(4), 664-678.

Brady, E. U., & Kendall, P. C. (1992). Comorbidity of anxiety and depression in children and adolescents. *Psychological Bulletin, 111*(2), 244-255.

Brendle J. R., & Wenzel, A. (2004). Differentiating between memory and interpretative biases in socially anxious and nonanxious individuals. *Behaviour Research and Therapy, 42*, 155-171.

Bretherton, I., Fritz, J., Zahn-Waxler, C., & Ridgeway, D. (1986). Learning to talk about emotions: A functionalist perspective. *Child Development, 57*, 529-548.

Breton, J., Bergeron, L., Valla, J., Berthiaume, C., Gaudet, N., Lambert, J., & ... Lépine, S. (1999). Quebec Child Mental Health Survey: Prevalence of DSM-III—R mental health disorders. *Journal Of Child Psychology And Psychiatry, 40*(3), 375-384.

Brewin, C. R. (1988). Cognitive foundations of clinical psychology. Hove, UK: Erlbaum.

Cartwright-Hatton, S., & Wells, A. (1997). Beliefs about worry and intrusions: The Meta-Cognitions Questionnaire and its correlates. *Journal of Anxiety Disorders, 11*, 279-296.

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56*, 267-283.

Caspi, A., Henry, B., McGee, R. O., & Moffitt, T. E. (1995). Temperamental origins of child and adolescent behavior problems: From age three to fifteen. *Child Development, 66*(1), 55-68. Cassidy & Berlin, 1994;

Cattell, R. B. (1966). Handbook of multivariate experimental psychology. Rand McNally: Chicago.

Chess, S., & Thomas, A. (1984). Origins and evolution of behavior disorders: From infancy to early adult life. Cambridge, MA US: Harvard University Press.

Clark, D. A., (2004). Cognitive Behavior Therapy for OCD. New York: Guilford Press.

Clark, D. A., Beck, A. T. (2010). Cognitive Therapy of Anxiety Disorders: Science and Practice. New York: Guilford.

Costello, A. (1989). Reliability in diagnostic interviewing. In C. G. Last, M. Hersen (Eds.) , Handbook of child psychiatric diagnosis (pp. 28-40). Oxford England: John Wiley & Sons.

Costello, E. J., & Benjamin, R. (1989). Epidemiology and child diagnosis. In C. G. Last, M. Hersen (Eds.) , Handbook of child psychiatric diagnosis (pp. 496-516). Oxford England: John Wiley & Sons.

Costello, E., & Angold, A. (1995). Epidemiology. In J. S. March (Ed.) , Anxiety disorders in children and adolescents (pp. 109-124). New York, NY US: Guilford Press.

Cowan, P. A., Cohn, D. A., Cowan, C., & Pearson, J. L. (1996). Parents' attachment histories and children's externalizing and internalizing behaviors: Exploring family systems models of linkage. *Journal Of Consulting And Clinical Psychology,64*(1), 53-63.

Craske, M. G. (2003). Origins of phobias and anxiety disorders: Why more women than men? Amsterdam, The Netherlands: Elsevier.

Cresswell & O'Conner, 2006

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin, 115*(1), 74-101.

Dadds. M. R., Barrett, P. M. (1996). Family processes in child and adolescent anxiety and depression. Behaviour Change, 2, 120-128.Dadds, M.R., Rapee, R.M., & Barrett, P.M. (1994). Behavioral observation. In T. H. Ollendick, N. J. King, & W. Yule (Eds.), International handbook of phobic and anxiety disorders in children and adolescents (pp. 349-364). New York: Plenum.

Davey, G. C. L. (1997). A conditioning model of phobias. In G. C. L. Davey (Ed.), Phobias: A handbook of theory, research and treatment (pp. 301-322). Chrichester: Wiley.

de Jong, P. J. (2002). Implicit self-esteem and social anxiety: differential self-favouring effects in high and low anxious individuals. *Behavior Research and Therapy, 40*, 501–508.

De Wolff, M., & van IJzendoorn, M. H. (1997). Sensitivity and attachment: A meta-analysis on parental antecedents of infant attachment. *Child Development, 68*(4), 571-591.

Dodge, K. A. (1986). A social information processing model of social competence in children. In M. Perlmutter (Ed.), *Minnesota Symposium on Child Psychology, 18,* 77-125.

Dodge, K. A. (1993). Social cognitive mechanixmx in the development of conduct disorder and depression. *Annual Review of Psychology, 44,* 559-584.

Dugas, M. J., Freeston, M. H., & Ladouceur, R. (1997). Intolerance of uncertainty and problem orientation in worry. *Cognitive Therapy and Research, 21*, 593-606.

Dugas, M. J., Gagnon, F., Ladouceur, R., & Freeston, M. H. (1998). Generalized anxiety disorder: A preliminary test of a conceptual model. *Behaviour Research and Therapy, 36*, 215-226.

Dugas, M. J., Gosselin, P., & Ladouceur, R. (2001). Intolerance of uncertainty and worry: Investigating specificity in a non-clinical sample. *Cognitive Therapy and Research, 25,* 551-558.

Dugas, M. J., Merchand, A., & Ladouceur, R. (2005). Further validation of cognitive-behavioral model of generalized anxiety disorder: Diagnostic and symptom specificity. *Journal of Anxiety Disorders, 19*, 329-343.

Dumas, J. E., LaFreniere, P. J., & Serketich, W. J. (1995). 'Balance of power': A transactional analysis of control in mother-child dyads involving socially

competent, aggressive, and anxious children. *Journal Of Abnormal Psychology,104*(1), 104-113.

DuPont, R. L. (1996). Therapeutic approaches to anxiety disorders. In , The Hatherleigh guide to psychiatric disorders(pp. 97-117). New York, NY US: Hatherleigh Press.

Eisen, A. R., & Schaefer, C. E. (2005). Separation anxiety in children and adolescents: An individualized approach to assessment and treatment. New York, NY US: Guilford Press.

Englund, M. M., Levy, A. K., Hyson, D. M., & Sroufe, L. (2000). Adolescent social competence: Effectiveness in a group setting. *Child Development, 71*(4), 1049-1060.

Essau, C. A., Conradt, J., & Petermann, F. (1999). Frequency and comorbidity of social phobia and social fears in adolescents. *Behaviour Research And Therapy, 37*(9), 831-843.

Essau, C. A., Conradt, J., & Petermann, F. (2000). Frequency, comorbidity, and psychosocial impairment of anxiety disorders in German adolescents. *Journal Of Anxiety Disorders, 14*(3), 263-279.

Ferrell, C. B., Beidel, D. C., & Turner, S. M. (2004). Assessment and Treatment of Socially Phobic Children: A Cross Cultural Comparison. *Journal Of Clinical Child And Adolescent Psychology, 33*(2), 260-268.

Foley, D. L., Pickles, A., Maes, H. M., Silberg, J. L., & Eaves, L. J. (2004). Course and Short-Term Outcomes of Separation Anxiety Disorder in a Community Sample of

Twins. *Journal Of The American Academy Of Child & Adolescent Psychiatry, 43*(9), 1107-1114.

Folkman, S. (1984). Personal control and stress and coping processes: A theoretical analysis. *Journal Of Personality And Social Psychology, 46*(4), 839-852.

Francis, G., Last, C. G., & Strauss, C. C. (1987). Expression of separation anxiety disorder: The roles of age and gender. *Child Psychiatry And Human Development, 18*(2), 82-89.

Francis, G., Last, C. G., & Strauss, C. C. (1992). Avoidant disorder and social phobia in children and adolescents. *Journal Of The American Academy Of Child & Adolescent Psychiatry, 31*(6), 1086-1089.

Freeston, M. H., Ladouceur, R., Rheaume, J., Letarte, H., Gagnon, F., & Thibodeau, N. (1994). Self-report of obsessions and worry. *Behaviour Research and Therapy, 32*, 29-36.

Freeston, M. H., Rheaume, J., Letarte, H., Dugas, M., & Ladouceur, R. (1994). Why do people worry? *Personality and Individual Differences, 17*, 791-802.

Garber, J., & Robinson, N. S. (1997). Cognitive vulnerability in children at risk for depression. *Cognition And Emotion,11*(5-6), 619-635.

Giles, D. E., & Rush, A. J. (1983). Cognitions, schemas, and depressive symptomatology. In M. Rosenbaum, C. M. Franks, & Y. Jaffe (Eds.), *Perspectives on behavior therapy (pp. 184-199). New Yord: Springer.*

Ginsberg, G. S., & Silverman, W. K. (1996). Phobic and anxiety disorders in Hispanic and Caucasian youth. *Journal of Anxiety Disorders, 10*, 517-528.

Greenburg, P. E., Sisitsky, T., Kessler, R. C., Finkelstein, S. N., Berndt, E. R., Davidson, J. R. T., et al. (1999). The economic burden of anxiety disorders in the 1990s. *Journal of Clinical Psychiatry, 60*, 427-435.

Gren-Landell, M., Tillfors, M., Furmark, T., Bohlin, G., Andersson, G., & Svedin, C. (2009). Social phobia in Swedish adolescents: Prevalence and gender differences. *Social Psychiatry And Psychiatric Epidemiology, 44*(1), 1-7.

Grills, A. E., & Ollendick, T. (2003). Multiple informant agreement and the Anxiety Disorders Interview Schedule for Parents and Children. *Journal of the American Academy of Child and Adolescent Psychiatry 42*, 30-40.

Hackmann, A., Surawy, C., & Clark, D. M. (1998). Seeing yourself through others' eyes: A study of spontaneously occurring images on social phobia. *Behaviourial and Cognitigve Psychotherapy, 26*, 3-12.

Hedlund, S., & Rude, S. S. (1995). Evidence of latent depressive schemata in formerly depressed individuals. *Journal of Abnormal Psychology, 104,* 517-525.

Hoffart, A., Sexton, H., Hedley, L. M., Wang, C. E., Holthe, H., Haugum, J. A., & ... Holte, A. (2005). The Structure of Maladaptive Schemata: A Confirmatory Factor Analysis and a Psychometric Evaluation of Factor-Derived Scales. *Cognitive Therapy And Research, 29*(6), 627-644.

Hollon, S. D., Kendall, P. C., & Lumry, A. (1986). Specificity of depressotypic cognitions in clinical depression. *Journal of Abnormal Psychology, 95*, 52–59.

Isabella, R. A. (1993). Origins of attachment: Maternal interactive behavior across the first year. *Child Development,64*(2), 605-621.

Jaenicke, C., Hammen, C., Zupan, B., & Hiroto, D. (1987). Cognitive vulnerability in children at risk for depression. *Journal Of Abnormal Child Psychology, 15*(4), 559-572.

Kagan, J. (1989). Temperamental contributions to social behavior. *American Psychologist, 44*, 668-674.

Kane, M. T., & Kendall, P. C. (1989). Anxiety disorders in children: A multiple-baseline evaluation of a cognitive-behavioral treatment. *Behavior Therapy, 20*(4), 499-508.

Keller, M. B., Lavori, P. W., Wunder, J., & Beardslee, W. R. (1992). Chronic course of anxiety disorders in children and adolescents. *Journal Of The American Academy Of Child & Adolescent Psychiatry, 31*(4), 595-599.

Kessler, R. C. 2003. Epidemiology of women and depression. Journal of Affective Disorders, 74, 5–13.

Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. E. (2005). Prevalence, secerity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*, 617-627.

Kessler, R. C., McGonagle, K. A., Shanyang, Z., Nelson, B., Hughes, M., Eshleman, S., et al. 1994 . Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. *Archives of General Psychiatry, 51*, 8-19.

Kochanska, G. (2001). Emotional development in children with different attachment histories: The first three years. *Child Development, 72*(2), 474-490.

Kovacs, M., Gatsonis, C., Paulauskas, S. L., & Richards, C. (1989). Depressive disorders in childhood: IV. A longitudinal study of comorbidity with and risk for anxiety disorders. *Archives Of General Psychiatry, 46*(9), 776-782.

Lang, P. J. (1968). Fear reduction and fear behavior: Problems in treating a construct. In J. M. Shlien (Ed.), The structure of emotion (pp. 18-30). Seattle, WA: Hogrefe & Huber.

Langley, A. K., Bergman, R. L., & Piacintini, J. C. (2002). Assessment of childhood anxiety. *International Review of Psychiatry,14*, 102-113.

Last, C. G., & Perrin, S. (1993). Anxiety disorders in African-American and White children. *Journal Of Abnormal Child Psychology, 21*(2), 153-164.

Last, C. G., Francis, G., Hersen, M., & Kazdin, A. E. (1987). Separation anxiety and school phobia: A comparison using DSM-III criteria. *The American Journal Of Psychiatry, 144*(5), 653-657.

Last, C. G., Hersen, M., Kazdin, A. E., & Finkelstein, R. (1987). Comparison of DSM-III separation anxiety and overanxious disorders: Demographic characteristics and patterns of comorbidity. *Journal Of The American Academy Of Child & Adolescent Psychiatry, 26*(4), 527-531.

Last, C. G., Perrin, S., Hersen, M., & Kazdin, A. E. (1992). DSM-III—R anxiety disorders in children: Sociodemographic and clinical characteristics. *Journal Of The American Academy Of Child & Adolescent Psychiatry, 31*(6), 1070-1076.

Last, C. G., Perrin, S., Hersen, M., & Kazdin, A. E. (1996). A prospective study of childhood anxiety disorders. *Journal Of The American Academy Of Child & Adolescent Psychiatry, 35*(11), 1502-1510.

Last, C. G., Strauss, C. C., & Francis, G. (1987). Comorbidity among childhood anxiety disorders. *Journal Of Nervous And Mental Disease, 175*(12), 726-730.

Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. New York: Springer.

LeBaron, S., & Zeltzer, L. (1984). Assessment of acute pain and anxiety in children and adolescents by self-reports, observer reports, and a behavioral checklist. *Journal of Consulting and Clinical Psychology, 52,* 729-738.

Lee, C. W., Taylor, G., & Dunn, J. (1999). Factor structure of the Schema Questionnaire in a large clinical sample. *Cognitive Therapy And Research, 23*(4), 441-451.

Lundh, L. –G., & Ost, L. –G. (1997). Explicit and implicit memory bias in social phobia: The role of subdiagnostic type. *Behaviour Research and Therapy, 35*, 305-317.

Lyneham, H. J., Abbott, M. J., & Rapee, R. M. (2007). Interrater reliability of the anxiety disorders interview schedule for DSM-IV: Child and parent version. *Journal Of The American Academy Of Child & Adolescent Psychiatry, 46*(6), 731-736.

Lytton, H. (1990), Child and parent effects in boys' conduct disorder: a reinterpretation. Developmental Psychology, 26, 683-697.

MacLeod, C., Campbell, L., Rutherford, E., & Wilson, E. (2004). The causal status of anxiety-linked attentional and interpretative bias. In J. Yiend (Ed.), Cognition, emotion and psychopathology: Theoretical, empirical and clinical directions (pp. 172-189). Cambridge, UK: Cambridge University Press.

Magee, J. C., & Zinbarg, R. E. (2007). Suppressing and focusing on a negative imagery memory in social anxiety: Effects on unwanted thoughts and mood. *Behaviour Research and Therapy, 45*, 2836-2849.

Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. *Monographs Of The Society For Research In Child Development, 50*(1-2), 66-104.

Manicavasagar, V., Silove, D., Curtis, J. et al. (2000). Continuities of separation anxiety from early life into adulthood. Journal of Anxiety Disorders, 14, 1–18.March, J. S., Parker, J. A., Sullivan, K., & Stallings, P. (1997). The Multidimensional Anxiety Scale for Children (MASC): Factor structure, reliability, and validity. *Journal Of The American Academy Of Child & Adolescent Psychiatry, 36*(4), 554-565.

Masi, G., Mucci, M., Favilla, L., Romano, R., & Poli, P. (1999). Symptomatology and comorbidity of generalized anxiety disorder in children and adolescents. *Comprehensive Psychiatry, 40*(3), 210-215.

Maziade, M., Caron, C., Côté, R., & Mérette, C. (1990). Psychiatric status of adolescents who had extreme temperaments at age 7. *The American Journal Of Psychiatry, 147*(11), 1531-1536.

Merikangas, K., Zhang, H., Avenevoli, S., Acharyya, S., Neuenschwander, M., & Angst, J. (2003). Longitudinal trajectories of depression and anxiety in a prospective community study. *Archives Of General Psychiatry, 60*(10), 993-1000.

Montorio, I., Wetherell, J., & Nuevo, R. (2006). Beliefs about worry in community-dwelling older adults. *Depression And Anxiety, 23*(8), 466-473.

Muris, P., Meesters, C., Merckelbach, H., Sermon, A., & Zwakhalen, S. (1998). Worry in normal children. *Journal Of The American Academy Of Child & Adolescent Psychiatry, 37*(7), 703-710.

Muris, P., Merckelbach, H., Meesters, C., & van den Brand, K. (2002). Cognitive development and worry in normal children. *Cognitive Therapy And Research, 26*(6), 775-785.

Nelson, E. E., McClure, E. B., Monk, C. S., Zarahn, E., Bilder, R. M., Leibenluft, E., et al. (2003). Developmental differences in neuronal engagement during implicit encoding of emotional faces: an event-related fMRI study. Journal Child Psychology Psychiatry, 44, 1015–1024.

Nelson, K., & Fivush, R. (2004). The emergence of autobiographical memory: A social cultural developmental theory. *Psychological Review, 111*(2), 486-511.

Newman, D. L., Moffitt, T. E., Silva, P. A., Caspi, A., Magdol, L., & Stanton, W. R. (1996). Psychiatric disorder in a birth cohort of young adults: Prevalence, cormorbidity, clinical significance, and new case incidence from ages 11 to 21. *Journal of Consulting and Clinical Psychology, 64*, 552-562.

Obsessive Compulsive Cognitions Work Group. (2003). Psychometric validation of the Obsessive Beliefs Questionnaire and the Interpretation of Intrusions Inventory: part 1. Behaviour Research and Therapy, 41, 863–878.

Ollendick, T. H., & King, N. J. (1998). Empirically supported treatments for children with phobic and anxiety disorders: Current status. *Journal Of Clinical Child Psychology, 27*(2), 156-167.

Ost, L. –G. (1987b). Age of onset in different phobias. *Journal of Abnormal Psychology, 96*, 223-229.

Piaget, Jean (1932). The Moral Judgment of the Child. London: Kegan Paul, Trench, Trubner and Co.

Price, J. P. (2007). Cognitive schemata, defense mechanisms and post-traumatic stress symptomatology. *Psychology & Psychotherapy: Theory, Research & Practice, 80*(3), 343-353.

Rachman, S. (1977). The conditioning theory of fear-acquisition: A critical examination. *Behaviour Research and Therapy, 15*, 375-387.

Rachman, S. J. (2004). Anxiety. (2nd ed.). East Sussex, UK: Oxford University Press.

Rapee, R. M., McCallum, S. L., Melville, L. F., Ravenscroft, H., & Rodney, J. M. (1994). Memory bias in social phobia. *Behvaiour Research and Therapy, 32*, 89-99.

Reilly-Harrington, Fresco, Whitehouse, & Zechmeister, 1999

Rinck, M., & Becker, E. S. (2005). A comparison of attentional b iases and memory biases in women with social phobia and major depression. *Journal of Abnormal Psychology, 114*, 62-74.

Riskind, J. H. (1997). Looming vulnerability to threat: A cognitive paradigm for anxiety. *Behaviour Research and Therapy, 35*, 386-404.

Riso, L. P., Froman, S. E., Raouf, M., Gable, P., Maddux, R. E., Turini-Santorelli, N., & ... Cherry, M. (2006). The Long-Term Stability of Early Maladaptive Schemata. *Cognitive Therapy And Research, 30*(4), 515-529.

Rodebaugh, T. L. (2009). Social phobia and perceived friendship quality. *Journal Of Anxiety Disorders, 23*(7), 872-878.

Romano, E., Tremblay, R. E., Vitaro, F., Zoccolillo, M., & Pagani, L. (2001). Prevalence of psychiatric diagnoses and the role of perceived impairment: Findings from an adolescent community sample. *Journal Of Child Psychology And Psychiatry, 42*(4), 451-461.

Rubin, K. H., & Mills, R. S. (1991). Conceptualizing developmental pathways to internalizing disorders in childhood. Canadian *Journal Of Behavioural Science/Revue Canadienne Des Sciences Du Comportement, 23*(3), 300-317.

Rude, S. S., Covich, J., Jarrold, W., Hedlund, S., & Zentner, M. (2001) Detecting depressive scchemata in vulnerable individuals: Questionnaires versus laboratory tasks. *Cognitive Therapy and Research, 25*(1), 103-116.

Ryan, N. D., Puig-Antich, J., Ambrosini, P., & Rabinovich, H. (1987). The clinical picture of major depression in children and adolescents. *Archives Of General Psychiatry, 44*(10), 854-861.

Schmidt, N. B., Joiner, T. E., Young, J. E., & Telch, M. J. (1995). The Schema Questionnaire: Investigation of psychometric properties and the hierarchical structure of a measure of maladaptive schemata. *Cognitive Therapy And Research, 19*(3), 295-321.

Schmidt, N. B., Joiner, T. E., Young, J. E., & Telch, M. J. (1995). The Schema Questionnaire: Investigation of psychometric properties and the hierarchical structure of a measure of maladaptive schemata. *Cognitive Therapy And Research, 19*(3), 295-321.

Schneier, F. R., Johnson, J., Hornig, C. D., & Liebowitz, M. R. (1992). Social phobia: Comorbidity and morbidity in an epidemiologic sample. *Archives Of General Psychiatry, 49*(4), 282-288.

Schneier, F. R., Johnson, J., Hornig, C. D., Liebowitz, M. R., & Weissman, M. M., (1992). Social phobia: Comorbidity and morbidity in epidemiologic sample. *Archives of General Psychiatry, 49*, 282-288.

Schuurmans, J., Comijs, H. C., Beekman, A. T. F., de Beurs, E., Deeg, D. J. H., Emmelkamp, P. M. G., et al. (2005). The outcome of anxiety disorders in older people at 6-year follow-up: Results from the Longitudinal Aging Study Amsterdam. *Acta Psychiatrica Scandinavica, 111*, 420-428.

Seedat, S., & Stein, M. B. (2004). Double-blind, placebo-controlled assessment of combined clonazepam with paroxetine compared with paroxetine monotherapy for generalized social anxiety disorder. *Journal of Clinical Psychiatry, 65,* 244-248.

Segal, Z. V. (1988). Appraisal of the self-schema construct in cognitive models of depression. *Psychological Bulletin, 103*(2), 147-162.

Shaffer, D. R. (2002). Developmental psychology: childhood and adolescence, 6th edn. Wadsworth, Belmont CA.Sherbourne, C. D., Wells, K. B., & Judd, L. L. (1996).

Functioning and well-being of patients with panic disorder. *American Journal of Psychiatry, 153*, 213-218.

Shirk, S. R. (1988). Cognitive development and child psychotherapy. New York, NY US: Plenum Press.

Silove, D. D., Harris, M. M., Morgan, A. A., & Boyce, P. P. (1995). Is early separation anxiety a specific precursor of panic disorder-agoraphobia? A community study. *Psychological Medicine, 25*(2), 405-411.

Silove, D., Manicavasagar, V., 1993. Adults who feared school: is early separation anxiety specific to the pathogenesis of panic disorder. *Acta Psychiatr. Scand., 88*, 385–390.

Silove, D., Manicavasagar, V., O'Connell, D., & Blaszczynski, A. (1993). The development of the Separation Anxiety Symptom Inventory (SASI). *Australian And New Zealand Journal Of Psychiatry, 27*(3), 477-488.

Silverman, W. K., & Albano, A. M. (1996). The Anxiety Disorders Interview Schedule for Children DSM-IV Children and Parent Version. San Antonio: Psychological Corporation.

Silverman, W. K., & Dick-Niederhauser, A. (2004). Separation Anxiety Disorder. In T. L. Morris, J. S. March (Eds.) ,Anxiety disorders in children and adolescents (2nd ed.) (pp. 164-188). New York, NY US: Guilford Press.

Siqueland, L., Kendall, P. C., & Steinberg, L. (1996). Anxiety in children: Perceived family environments and observed family interaction. *Journal Of Clinical Child Psychology, 25*(2), 225-237.

Spence, S. H., Donovan, C., & Brechman-Toussaint, M. (1999). Social skills, social outcomes, and cognitive features of childhood social phobia. *Journal Of Abnormal Psychology, 108*(2), 211-221.

Stallard, P., & Rayner, H. (2005). The development and preliminary evaluation of a schema questionnaire for children (SQC). *Behavioral and Cognitive Psychotherapy, 33*(2), 217-224.

Stein, M. B. (2004). Public health perspectives of generalized anxiety disorder. Journal of Clinical Psychiatry 65(13), 3–7.

Stopa, L., & Clark, D. M. (1993). Cognitive processes in social phobia. *Behaviour Research and Therapy, 31*, 255-267.

Strauss, C. C., & Last, C. G. (1993). Social and simple phobias in children. *Journal Of Anxiety Disorders, 7*(2), 141-152.

Strauss, C. C., Lahey, B. B., Frick, P., Frame, C. L., & Hynd, G. W. (1988). Peer social status of children with anxiety disorders. *Journal Of Consulting And Clinical Psychology, 56*(1), 137-141.

Strauss, C. C., Last, C. G., Hersen, M., & Kazdin, A. E. (1988). Association between anxiety and depression in children and adolescents with anxiety disorders. *Journal Of Abnormal Child Psychology, 16*(1), 57-68.

Strauss, C. C., Lease, C. A., Last, C. G., & Francis, G. (1988). Overanxious disorder: An examination of developmental differences. *Journal Of Abnormal Child Psychology, 16*(4), 433-443.

Thomas, A., & Chess, S. (1977). Temperament and development. Oxford England: Brunner/Mazel.

Thomas, A., Chess, S., & Korn, S. J. (1982). The reality of difficult temperament. Merrill-Palmer Quarterly, 28(1), 1-20.

Tolin, D. F., Abramowitz, J. S., Brigidi, B. D., & Foa, E. B. (2003). Intolerance of uncertainty in obsessive-compulsive disorder. *Journal of Anxiety Disorders, 17*, 233-242.

Tracey, S. A., Chorpita, B. F., Douban, J., & Barlow, D. H. (1997). Empirical evaluation of DSM-IV generalized anxiety disorder criteria in children and adolescents. *Journal Of Clinical Child Psychology, 26*(4), 404-414.

Turner, S. M., & Beidel, D. C. (1985). Empirically derived subtypes of social anxiety. *Behavior Therapy, 16*, 384-392.

Turner, S. M., Beidel, D. C., Borden, J. W., Stanley, M. R., & Jacobs, R. G. (1991). Social phobia: Axis I and II correlates. *Journal of Abnormal Psychology, 100*, 102-106.

Turner, S. M., Beidel, D. C., Dancu, C. V., & Keys, D. J. (1986). Psychopathology of social phobia and comparison to avoidant personality disorder. *Journal of Abnormal Psychology, 95*, 389-394.

Valez, C. N., Johnson, J., & Cohen, P. (1989). A longitudinal analysis of selected risk factors of childhood psychopathology. *Journal of American Academy of Child and Adolescent Psychiatry, 28*, 861-864.

Van Vlierberghe, L., Braet, C., Bosmans, G., Rosseel, Y., & Bögels, S. (2010). Maladaptive schemas and psychopathology in adolescence: On the utility of Young‟s schema theory in youth. Cognitive Therapy and Research, 34, 316-332.

Vasey, M. W. (1993). Development and cognition in childhood anxiety: The example of worry. *Advances In Clinical Child Psychology*, 151-39.

Vasey, M. W., Crnic, K. A., & Carter, W. G. (1994). Worry in childhood: A developmental perspective. *Cognitive Therapy And Research, 18*(6), 529-549.

Verhulst, F. C., van der Ende, J., Ferdinand, R. F., & Kasius, M. C. (1997). The prevalence of DSM-III-R diagnoses in a national sample of Dutch adolescents. *Archives Of General Psychiatry, 54*(4), 329-336.

Weems, C. F., Silverman, W. K., & La Greca, A. M. (2000). What do youth referred for anxiety problems worry about? Worry and its relation to anxiety and anxiety disorders in children and adolescents. *Journal Of Abnormal Child Psychology,28*(1), 63-72.

Welburn, K., Coristine, M., Dagg, P., Pontefract, A., & Jordan, S. (2002). The Schema Questionnaire-Short Form: Factor analysis and relationship between schemata and symptoms. *Cognitive Therapy And Research, 26*(4), 519-530.

Wells, A. (1995). Mate-cognition and worry: A cognitive model of generalized anxiety disorder. *Behavioural and Cognitive Psychotherapy, 23*, 301-320.

Wells, A. (1999). A cognitive model of generalized anxiety disorder. *Behavior Modification, 23*, 526-555.

Wenzel, A., & Holt, C. S. (2002). Memory bias against threat in social phobia. *British Journal of Clinical Psychology, 41*, 73-79.

Whitaker, A., Johnson, J., Shaffer, D., Rapoport, J. L., Kalikow, K., Walsh, T., et al. (1990). Uncommon troubles in young people: Prevanence estimates of selected psychiatric disorders in a non-referred adolescent population. *Archives of General Psychiatry, 47*, 487-496.

Wittchen, H., Essau, C. A., von Zerssen, D., & Krieg, J. (1992). Lifetime and six-month prevalence of mental disorders in the Munich Follow-up Study. *European Archives Of Psychiatry And Clinical Neuroscience, 241*(4), 247-258.

Yonkers, K. A., Bruce, S. E., Dyck, I. R., & Keller, M. B. (2003). Chronicity, relapse, and illness: Course of panic disorder, social phobia, and generalized anxiety disorder. Findings in men and women from 8 years follow-up. *Depression and Anxiety, 17*, 173-179.

Young, J. E., & Brown, G. (2003). Young schema questionnaire. New York: Cognitive Therapy Center. Young, J. Young Schema Questionnaires: Informal Clinical Scoring Instructions. Retrieved July 13, 2012, from http://www.schematherapy.com/id111.htm

Young, J. E., Klosko, J. S., & Weishaar, M. E. (2003). Schema therapy: A practitioner's guide. New York, NY US: Guilford Press.

Young, J.E., & Brown, G. (2003). Young schema questionnaire: Short form. Available at http://www.schematherapy.com/id54.htm.

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